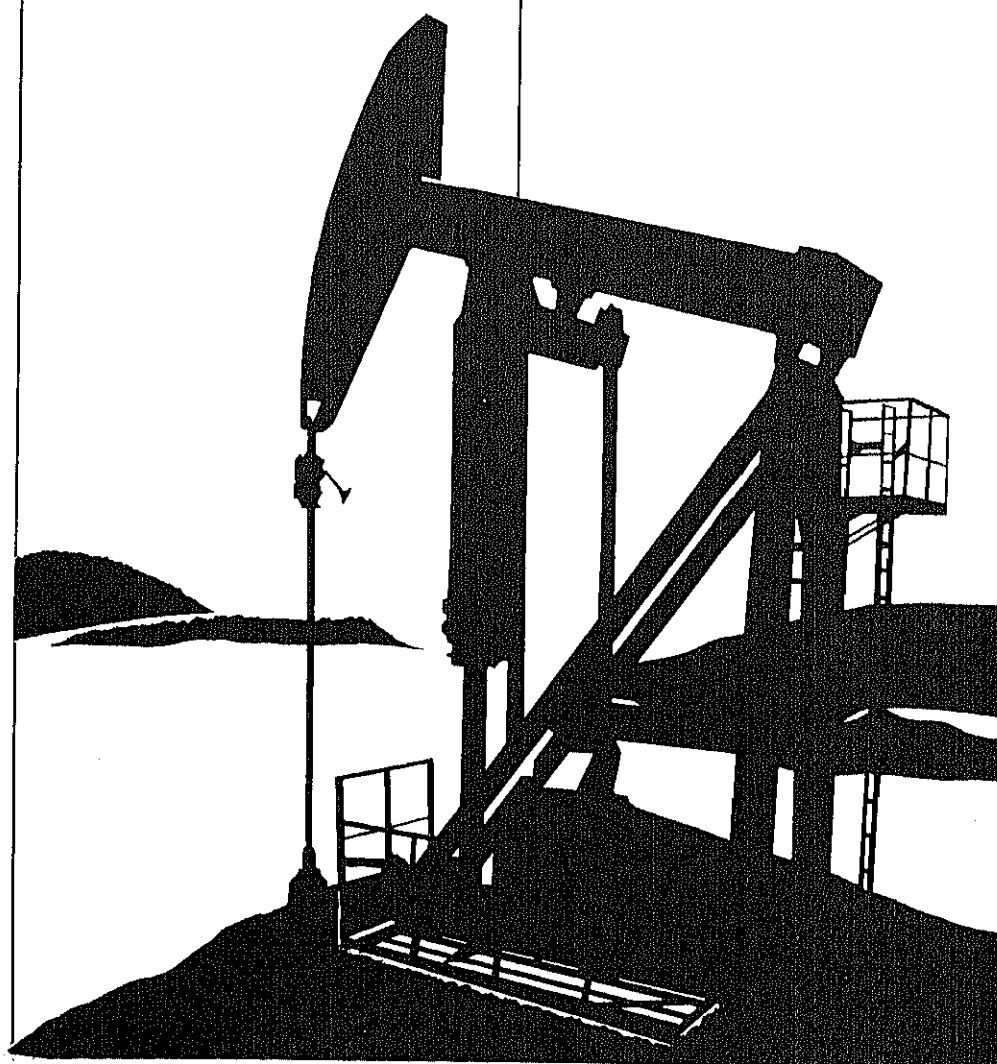




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# Petroleum Supply Monthly

Energy Information Administration  
Office of Oil and Gas  
**U.S. Department of Energy**



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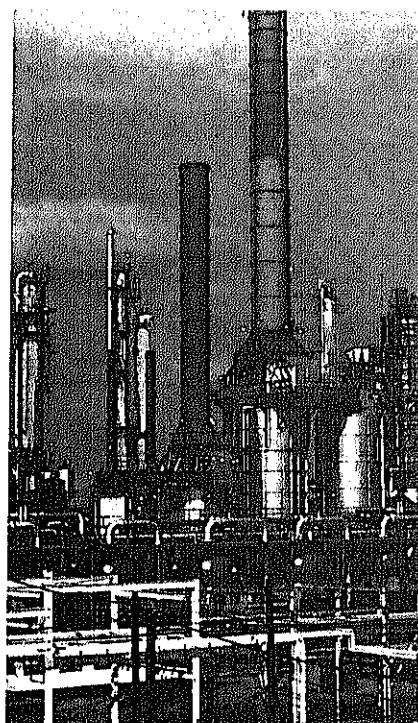
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Released for printing: June 29, 1982

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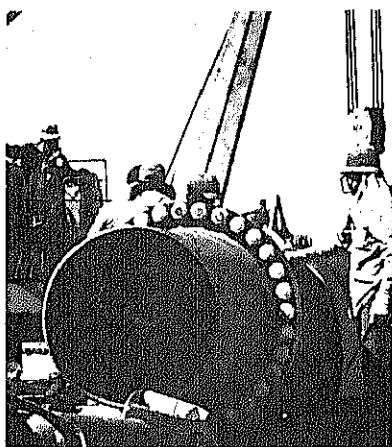
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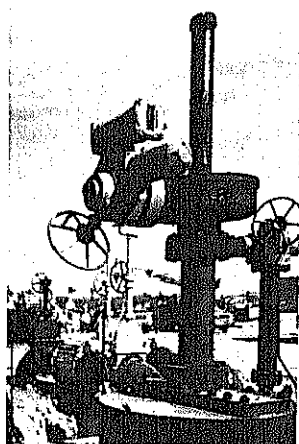
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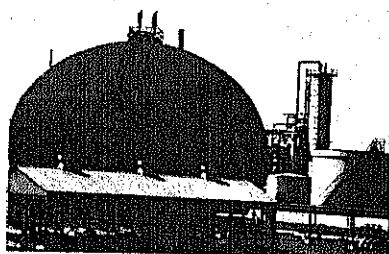


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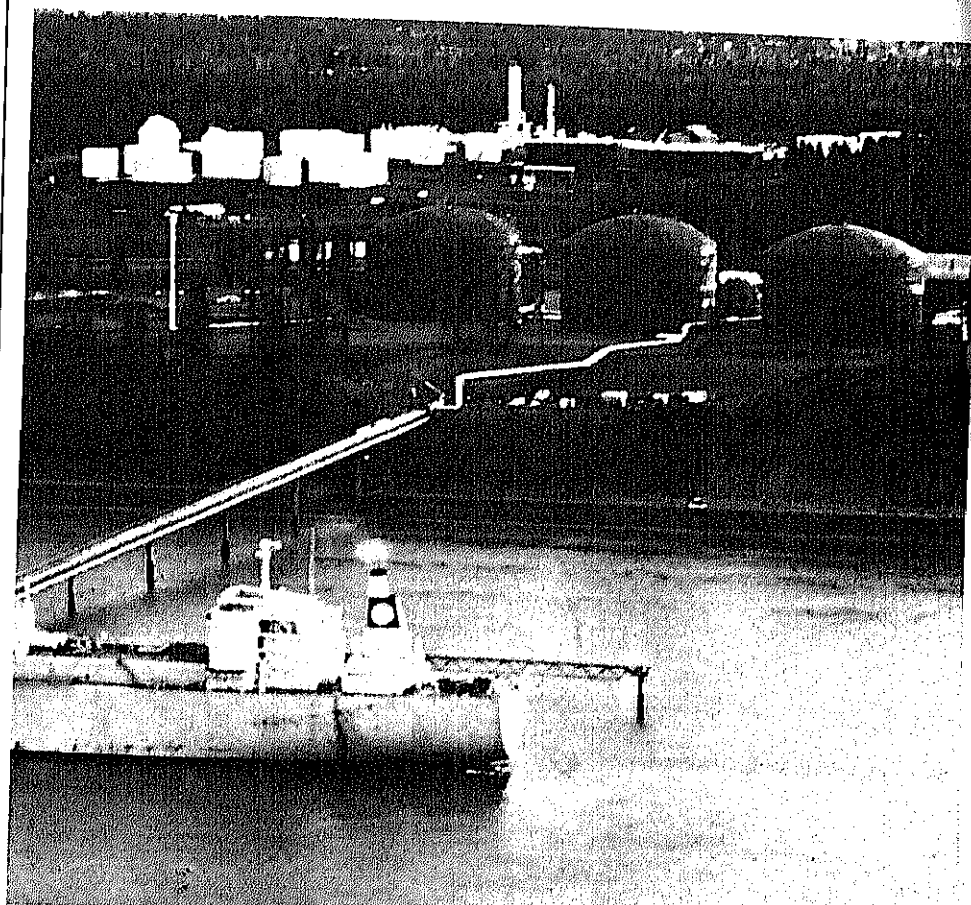
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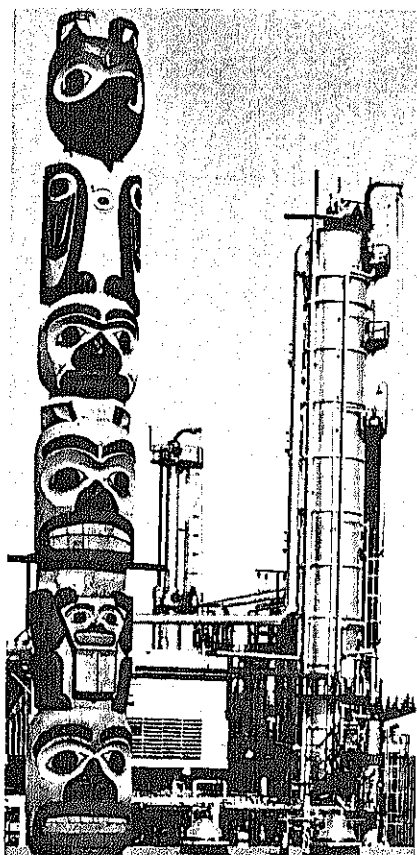
# **Petroleum Focus**







# Petroleum Focus



<sup>1</sup>Form EIA-177: Petroleum Refineries in the United States and U.S. Territories.

<sup>2</sup>Data were not collected for years 1942 through 1946.

<sup>3</sup>Downstream processing is further refinery processing of petroleum products after they have been produced either in crude oil distillation units or in other downstream units. Downstream processing equipment includes hydrocrackers, thermal crackers, thermal reformers, catalytic reformers, cokers, etc.

## 1982 EIA Petroleum Refinery Survey Results

### Synopsis

Early each year the Energy Information Administration (EIA) conducts a survey<sup>1</sup> of petroleum refineries to identify capacity changes that have occurred during the past year and to learn of refiners' plans for the upcoming year. This year marks the 60th year that the survey, begun by the Bureau of Mines in 1918, has been conducted.<sup>2</sup>

The recently completed 1982 survey reveals that twenty-three refineries with an aggregate crude oil distillation capacity of 451 thousand barrels per day that were operable on January 1, 1981, were permanently shutdown by January 1, 1982, and average utilization of the remaining refineries declined. Details of the survey will be published in EIA's *Petroleum Supply Annual*, scheduled for release in July 1982.

While the number of operable refineries decreased last year and average utilization declined, the shift toward more complex refining facilities begun several years ago continued. A number of refiners continued to upgrade their downstream<sup>3</sup> processing equipment in an attempt to diversify their product mixes and increase yields of lighter products such as gasoline and jet fuel.

### Changes in the Refining Industry 1979-1982

During 1979, crude oil distillation capacity grew while its utilization exceeded 80 percent of capacity. Throughout 1980, capacity continued to increase although utilization began to decline. During 1981, as utilization continued to decline, refiners closed down facilities and capacity decreased. (See Table 1.) Operable crude oil distillation capacity (operating

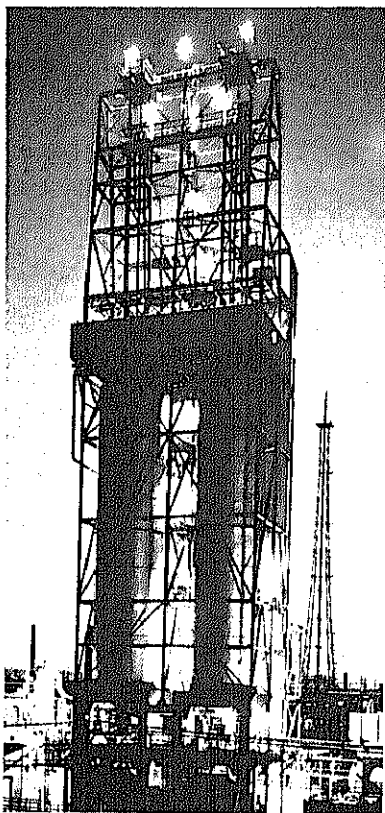
**Table 1. Refinery Operations  
(Thousand Barrels Per Day)**

	Refinery Capacity*	Input**	Utilization (Percent)	Idle Capacity*
<b>1979</b>				
1st Qtr.	17,441	14,725	84.4	293
2nd Qtr.	17,603	14,897	84.6	658
3rd Qtr.	17,680	15,204	86.0	539
4th Qtr.	17,815	14,962	84.0	789
<b>1980</b>				
1st Qtr.	17,988	14,388	80.0	378
2nd Qtr.	18,213	13,832	75.9	497
3rd Qtr.	18,281	13,512	73.9	553
4th Qtr.	18,413	13,467	73.1	639
<b>1981</b>				
1st Qtr.	18,621	13,100	70.3	569
2nd Qtr.	18,684	12,522	67.0	1,218
3rd Qtr.	18,656	12,843	68.8	1,316
4th Qtr.	18,442	12,572	68.2	1,559
<b>1982</b>				
1st Qtr.	17,890	11,773	65.8	1,786

\*As of the beginning of the first month of each quarter.

\*\*Average for quarter.

SOURCE: EIA-87 and EIA-177.



capacity plus idle capacity)<sup>4,5</sup> on January 1, 1982, was 17.9 million barrels per day (MMB/D), 731 thousand barrels per day (MB/D) less than at the beginning of the previous year. This is the first time that total operable capacity has dropped since 1966. In addition, idle capacity for the U.S. on January 1, 1982, is estimated at 1.8 MMB/D, a 214 percent increase over the January 1, 1981, level of 569 MB/D. Total operating crude distillation capacity on January 1, 1982, was reported at 16.1 MMB/D, an 11 percent decline from January 1, 1981. (See Table 2.)

On January 1, 1980, there were 319 operable refineries in the United States and capacity utilization averaged 75.5 percent during 1980. By January 1, 1981, there were 324 operable refineries and average refinery utilization during 1981 was 68.5 percent of capacity. By January 1, 1982, 301 refineries were operable in the United States and during January 1982 their utilization rate was 66.3 percent.

Of the 301 refineries operable on January 1, 1982, 74 refineries were either partially or totally idle. This can occur for operational reasons such as when a refinery is undergoing scheduled or unscheduled maintenance, and for economic reasons such as when a weak market exists for the particular products that the refinery produces.

Twenty-three refineries that were operating on January 1, 1981, were permanently shutdown by January 1, 1982, a loss of 461 MB/D of crude oil distillation capacity (see Table 3). The total loss in downstream capacity was 469 MB/D. The three largest shutdown refineries accounted for 50 percent of the crude oil distillation capacity loss, and 69 percent of the downstream capacity loss (see Exhibit 1). Fifteen of the shutdown refineries had no downstream capacity. The primary reasons for the shutdowns were the decline in petroleum consumption since the peak in 1978 and the decontrol of crude oil.

Crude oil allocation entitlements and associated Federal regulations, when they were in effect, ensured small refiners a source of crude oil at costs that were competitive with the large integrated refining companies. They required refiners to maintain the same supplier-marketer relationships that existed in 1972. With the deregulation of

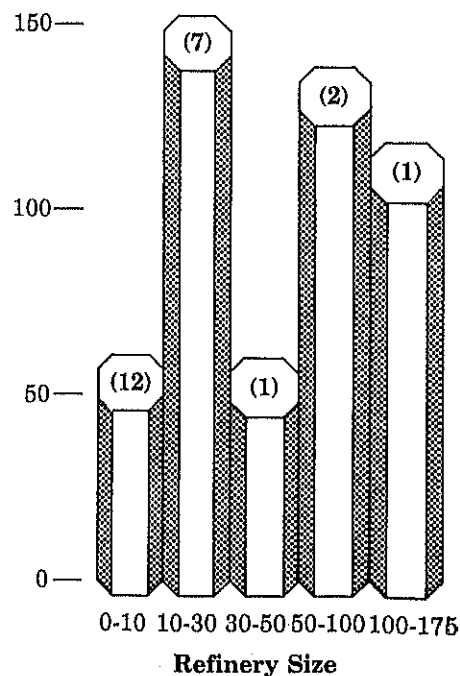
domestic crude oil prices, this program was ended. The loss of these arrangements encouraged several smaller, marginal companies to discontinue operations.

In addition, some refiners appear to have decided to change their marketing and distribution networks and these decisions have resulted in the closing of several refineries.

## The Shape of U.S. Refining Capacity 1982

Of the 301 refineries operable at the beginning of 1982, 204 (68 percent) had crude oil distillation capacity under 50 MB/D. The remaining 97 refineries (32 percent) reported capacities 50 MB/D or greater. This mix of refineries reflects a shift away from facilities smaller than 30 MB/D toward more refineries in the 30-50 and 100-175 MB/D size categories (Exhibit 2).

**Exhibit 1.**  
**Crude Oil Distillation Capacity Permanently Shutdown During 1981**  
(Thousand Barrels Per Day)  
*Numbers in parenthesis indicate number of refineries.*



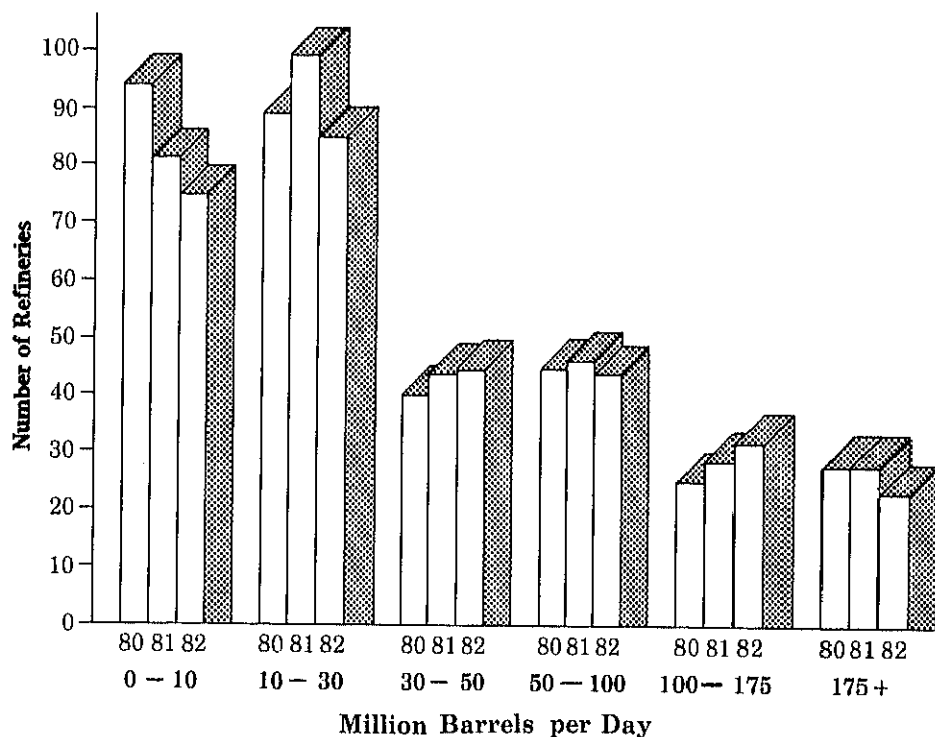
<sup>4</sup>Idle capacity refers to operable capacity that is shutdown but capable of being placed in operation within approximately 90 days.

<sup>5</sup>Operating capacity refers to capacity that is in operation.

*Despite a reduction in the number of operable refineries in the U.S., the industry is maintaining its flexibility to produce preferred fuels and to meet expected demand.*

## Exhibit 2. Distribution of Refineries By Size (1980-1982)

Source: EIA-177 (1980, 1981, 1982)



Although the number of refineries decreased from January 1, 1981 to January 1, 1982, the remaining refinery facilities continued to be upgraded to process crudes requiring more sophisticated equipment. In addition, some refiners closed less complex facilities while expanding others to be able to produce more marketable products. (See Table 4.) With the demand for the heavier petroleum products lagging behind the demand for the lighter petroleum products, refiners are enhancing their processing capabilities, which enable lighter fuels to be produced from the heavier oils.

### Product Output Projections

Industry estimates submitted to the Energy Information Administration for refinery production of major petroleum products in 1982 are summarized in

Table 5. Increases in production are expected in transportation fuels, particularly naphtha-type jet fuel for military use, kerosene-type jet fuel used by commercial aircraft, and unleaded motor gasoline.

### Conclusion

The EIA refinery survey reveals that there has been a decline in the total number of operable refineries, from 331 on January 1, 1981, to 301 on January 1, 1982, while some refinery facilities are being upgraded to meet changing market conditions. Because of the introduction of more sophisticated equipment in a number of refineries, the industry is maintaining its flexibility to produce preferred fuels. Further, the survey also reveals that the U.S. refining industry is equipped to meet expected levels of demand.

Table 2.

# Number and Capacity of Operable Petroleum Refineries by PAD District and State, as of January 1, 1982

PAD District and States	Number of Operable Refineries			Crude Capacity			
	Total	Operating	Idle <sup>1</sup>	Barrels per Calendar Day <sup>2</sup>		Barrels per Stream Day <sup>3</sup>	
				Operating	Idle	Operating	Idle
<b>PAD District I</b>							
Delaware	1	1	0	140,000	0	150,000	0
Florida	1	0	1	0	15,000	0	15,700
Georgia	2	2	0	29,000	0	32,200	0
Maryland	2	1	1	15,000	14,200	16,000	15,000
New Jersey	6	5	1	602,100	133,000	634,900	140,000
New York	2	2	0	97,900	0	106,000	0
Pennsylvania	9	9	0	704,041	0	747,100	0
Virginia	1	1	0	53,000	0	55,000	0
West Virginia	3	3	0	22,100	0	23,100	0
<b>Total</b>	<b>27</b>	<b>24</b>	<b>3</b>	<b>1,663,141</b>	<b>162,200</b>	<b>1,764,300</b>	<b>170,700</b>
<b>PAD District II</b>							
Illinois	8	7	1	948,100	76,200	1,002,000	81,260
Indiana	7	5	2	468,700	133,600	498,800	138,187
Kansas	11	9	2	452,959	12,500	481,133	13,750
Kentucky	4	3	1	244,100	3,000	252,300	3,500
Michigan	5	4	1	117,100	11,500	124,800	12,500
Minnesota	2	2	0	194,443	0	201,125	0
Missouri	1	1	0	104,000	0	111,000	0
Nebraska	1	1	0	5,600	0	6,170	0
North Dakota	3	2	1	60,250	5,000	63,600	5,250
Ohio	6	6	0	543,100	0	567,000	0
Oklahoma	13	12	1	526,100	40,400	543,900	42,000
Tennessee	1	1	0	49,500	0	49,900	0
Wisconsin	1	1	0	39,000	0	40,000	0
<b>Total</b>	<b>63</b>	<b>54</b>	<b>9</b>	<b>3,752,952</b>	<b>282,200</b>	<b>3,941,728</b>	<b>296,447</b>
<b>PAD District III</b>							
Alabama	6	6	0	142,900	0	150,500	0
Arkansas	4	4	0	53,000	11,200	54,900	11,500
Louisiana	34	26	8	2,287,480	219,391	2,399,583	237,205
Mississippi	7	6	1	355,300	16,000	379,559	20,000
New Mexico	7	7	0	117,924	0	129,416	0
Texas	65	48	17	4,322,094	745,654	4,601,800	834,800
<b>Total</b>	<b>123</b>	<b>97</b>	<b>26</b>	<b>7,278,698</b>	<b>992,245</b>	<b>7,715,758</b>	<b>1,103,505</b>
<b>PAD District IV</b>							
Colorado	3	3	0	84,400	0	87,500	0
Montana	6	6	0	146,250	7,800	152,650	8,000
Utah	8	8	0	162,300	4,200	171,000	4,300
Wyoming	12	10	2	209,555	20,180	218,100	25,190
<b>Total</b>	<b>29</b>	<b>27</b>	<b>2</b>	<b>602,505</b>	<b>32,180</b>	<b>629,250</b>	<b>37,490</b>
<b>PAD District V</b>							
Alaska	4	4	0	130,023	0	135,300	0
Arizona	1	1	0	4,015	0	5,700	0
California	43	38	5	2,233,065	301,600	2,397,946	339,600
Hawaii	1	1	0	48,000	0	50,000	0
Nevada	1	1	0	4,180	0	4,500	0
Oregon	1	0	1	0	15,000	0	16,000
Washington	8	7	1	387,000	730	408,800	1,000
<b>Total</b>	<b>59</b>	<b>52</b>	<b>7</b>	<b>2,806,283</b>	<b>317,330</b>	<b>3,002,246</b>	<b>356,600</b>
<b>United States, Total</b>	<b>301</b>	<b>254</b>	<b>47</b>	<b>16,103,579</b>	<b>1,786,155</b>	<b>17,053,282</b>	<b>1,964,742</b>
Virgin Islands	1	1	0	585,000	115,000	585,000	115,000
Puerto Rico	4	3	1	182,454	73,041	200,000	84,000
Hawaiian Foreign Trade Zone	1	1	0	67,900	0	67,900	0
Guam	1	1	0	43,900	0	47,160	0

<sup>1</sup>Does not include refineries that were permanently shutdown on January 1, 1982 and only includes refineries totally idle.

<sup>2</sup>Barrels Per Calendar Day represents the amount that can be processed in an average twenty-four hour period after making allowances for: downstream limitations, environmental constraints, types and grades of inputs, planned and unplanned downtime, and types and grades of products.

**Table 2.**  
**(Continued)**

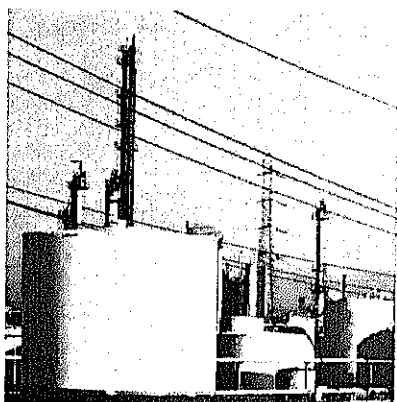
**Number and Capacity of Operable Petroleum Refineries by  
PAD District and State, as of January 1, 1982**

PAD District and States	Charge Capacity (Barrels per Stream Day) <sup>a</sup>							
	Vacuum Distilla- tion	Thermal Opera- tion	Catalytic Cracking (fresh)	Catalytic Cracking (Recycle)	Catalytic Reform- ing	Catalytic Hydro- cracking	Catalytic Hydro- refining	Catalytic Hydro- treating
<b>District I</b>								
Delaware	90,700	44,000	62,000	15,000	42,000	20,000	0	110,000
Florida	10,000	0	0	0	0	0	0	0
Georgia	0	0	0	0	0	0	0	0
Maryland	13,800	0	0	0	0	0	0	0
New Jersey	408,700	34,500	262,000	45,000	124,500	0	130,000	314,600
New York	55,000	0	22,000	0	11,000	0	15,200	11,000
Pennsylvania	334,180	0	249,300	23,300	212,900	55,000	113,000	378,800
Virginia	29,000	15,000	28,000	5,000	9,500	0	0	26,500
West Virginia	6,000	0	0	0	6,600	4,440	0	0
<b>Total</b>	<b>947,380</b>	<b>93,500</b>	<b>623,300</b>	<b>88,300</b>	<b>406,500</b>	<b>79,440</b>	<b>258,200</b>	<b>840,900</b>
<b>District II</b>								
Illinois	385,000	104,300	374,000	17,400	280,400	66,500	6,000	527,800
Indiana	262,200	20,000	215,000	11,000	123,500	0	50,000	203,160
Iowa	141,860	50,600	181,800	42,200	114,000	3,190	40,000	157,800
Kentucky	100,500	2,600	71,500	0	49,000	0	91,000	53,200
Michigan	26,000	0	45,000	1,300	35,000	0	17,700	18,700
Minnesota	110,000	24,000	75,800	0	45,500	0	116,000	12,600
Missouri	40,000	14,000	42,000	12,000	16,000	0	0	61,500
Nebraska	2,400	0	2,400	500	750	0	0	0
North Dakota	0	0	26,000	5,200	11,000	0	0	17,000
Ohio	202,000	27,400	186,700	33,800	148,700	74,000	31,500	160,500
Oklahoma	183,600	54,800	206,000	16,400	126,800	5,000	26,000	126,300
Tennessee	12,000	0	30,000	12,000	9,300	0	0	29,500
Wisconsin	15,000	0	9,500	1,000	9,800	0	0	17,300
<b>Total</b>	<b>1,485,560</b>	<b>297,700</b>	<b>1,465,700</b>	<b>152,800</b>	<b>969,750</b>	<b>148,690</b>	<b>378,200</b>	<b>1,385,260</b>
<b>District III</b>								
Alabama	32,000	10,000	0	0	23,600	0	4,000	43,300
Kansas	29,500	0	16,000	800	9,000	0	5,500	0
Louisiana	1,066,280	381,100	823,900	42,300	441,580	71,700	143,900	808,900
Mississippi	186,875	7,000	74,000	2,000	95,800	68,000	104,000	10,300
New Mexico	22,400	1,500	27,100	4,000	23,150	0	0	25,950
Texas	1,793,875	467,300	1,558,800	177,000	1,172,900	136,000	659,400	2,279,600
<b>Total</b>	<b>3,120,930</b>	<b>866,900</b>	<b>2,499,800</b>	<b>226,100</b>	<b>1,765,930</b>	<b>275,700</b>	<b>916,800</b>	<b>3,168,050</b>
<b>District IV</b>								
Colorado	36,000	4,500	24,500	825	19,500	0	0	23,700
Montana	37,100	8,700	51,600	12,450	44,100	4,900	3,500	112,450
North Dakota	47,000	8,500	54,000	10,100	26,400	1,200	0	35,600
Wyoming	97,020	13,000	71,500	16,700	36,950	0	7,700	61,000
<b>Total</b>	<b>217,120</b>	<b>34,700</b>	<b>201,600</b>	<b>40,075</b>	<b>126,950</b>	<b>6,100</b>	<b>11,200</b>	<b>237,750</b>
<b>District V</b>								
Alaska	10,000	0	0	0	10,000	7,500	0	0
Arizona	0	0	0	0	0	0	0	0
California	1,196,200	448,800	569,700	32,020	576,630	328,700	193,925	956,800
Hawaii	28,000	0	22,000	0	0	0	0	0
Nevada	2,400	0	0	0	0	0	0	0
Oregon	16,000	0	0	0	0	0	0	0
Washington	173,600	40,000	91,500	23,000	110,500	46,000	0	192,300
<b>Total</b>	<b>1,426,200</b>	<b>488,800</b>	<b>683,200</b>	<b>55,020</b>	<b>697,130</b>	<b>382,200</b>	<b>193,925</b>	<b>1,149,100</b>
<b>United States, Total</b>	<b>7,197,190</b>	<b>1,781,600</b>	<b>5,473,600</b>	<b>562,295</b>	<b>3,966,260</b>	<b>892,130</b>	<b>1,758,325</b>	<b>6,781,060</b>
<b>Islands</b>								
Puerto Rico	190,000	0	0	0	125,000	0	0	420,000
Virgin Islands	131,500	20,000	52,000	4,000	93,570	15,000	0	134,600
U.S. Virgin Islands	30,000	0	0	0	13,000	12,000	0	13,000
U.S. Virgin Islands Foreign Trade Zone	1,400	0	0	0	0	0	0	0

<sup>a</sup>Barrels Per Stream Day represents the amount a unit can process running at full capacity under optimal crude and product mix conditions.

Source: Form EIA-177.

*By January 1, 1982, 23 refineries that were operating on January 1, 1981 were permanently shutdown. This represents a loss of 451 MB/D of crude oil distillation capacity.*



**Table 3. Refineries Permanently Shutdown  
(Barrels per Calendar Day)**

Refineries	Location	Crude Distillation Capacity	Date Shutdown
<b>PAD District I</b>			
ATC Petroleum Inc.	Wilmington, North Carolina	11,900	1/82
ATC Petroleum Inc.	Newington, New Hampshire	13,400	1/82
Manatee Energy Co.	Port Manatee, Florida	28,400	10/81
Mobil Oil Corp.	Buffalo, New York	43,000	7/81
<b>Total</b>		<b>96,700</b>	
<b>PAD District II</b>			
Amoco Oil Co.	Wood River, Illinois	104,000	10/81
Conoco Inc.	Wrenshall, Minnesota	23,500	9/81
Dow Chemical U.S.A. Energy Development Inc.	Bay City, Michigan	20,000	9/81
Gulf Oil Corp.	Crossville, Illinois	1,000	4/81
Kentucky Oil and Refining Co.	Toledo, Ohio	50,300	11/81
Texaco Inc.	Troy, Indiana	1,500	10/81
Wireback Oil Co.	Lockport, Illinois	72,000	10/81
	Plymouth, Illinois	1,800	3/81
<b>Total</b>		<b>274,100</b>	
<b>PAD District III</b>			
Adobe Refining Co., Division of Funding Systems Refining Corp.	La Blanca, Texas	5,200	1/82
Carbonit Refinery Inc.	Hearne, Texas	11,000	1/82
Gulf Oil Corp.	Venice, Louisiana	28,700	12/81
Southern Union Refining Co.	Monument, New Mexico	5,400	10/81
Southland Oil Co.	Yazoo City, Mississippi	5,500	7/81
Texas Refining	Midland, Texas	2,500	6/81
Texas Standard Refining Inc.	Houston, Texas	1,800	10/81
<b>Total</b>		<b>60,100</b>	
<b>PAD District IV</b>			
Glenrock Refinery Inc.	Glenrock, Wyoming	6,000	9/81
Southwestern Refining Co.	La Barge, Wyoming	1,040	8/81
<b>Total</b>		<b>7,040</b>	
<b>PAD District V</b>			
Quad Refining Corp.	Bakersfield, California	7,000	10/81
Road Oil Sales Inc.	Bakersfield, California	6,000	1/82
<b>Total</b>		<b>13,000</b>	
<b>United States, Total</b>		<b>450,940</b>	

Source: Form EIA-177.

*While the number of refineries in the U.S. has decreased, refiners continue to upgrade their facilities to enhance their processing capabilities.*

**Table 4. U.S. Refining Capacity Comparison**  
(Thousand Barrels Per Day)

	1/1/81	1/1/82	Percent Change
Crude Oil Distillation (MB/CD)	18,621	17,890	-3.9
Downstream Charge (MB/SD)			
Vacuum Distillation	7,033	7,197	2.3
Thermal Operations <sup>1</sup>	1,587	1,782	12.3
Catalytic Reforming	4,098	3,966	-3.2
Catalytic Cracking	6,136	6,036	-1.6
Catalytic Hydrocracking	909	892	-1.9
Hydrotreating	1,777	1,758	-1.1
Hydrotreating	6,710	6,781	1.1
Downstream Production			
Alkylation	974	984	1.0
Aromatic Isomerization	429	452	5.4
Lubes	234	242	3.4
Coke (short ton/day)	55	53	-3.6
Asphalt	765	740	-3.3

Source: Form EIA-177.

<sup>1</sup>Thermal Operations—Includes thermal cracking and coking.

**Table 5. Refiner Projections of Major Product Production 1981-1982**  
(Thousand Barrels Per Day)

	Actual 1981	Projected 1982	Percent Change
Motor Gasoline, Leaded	3,207	3,398	6.0
Motor Gasoline, Unleaded	3,195	3,493	9.3
Jet Fuel, Naphtha-type	193	233	20.7
Jet Fuel, Kerosene-type	775	865	11.6
Residual Fuel Oil	1,316	1,303	-1.0
Distillate Fuel Oil	2,616	2,637	0.8
Total	11,302	11,929	5.5

Source: Form EIA-177 (January 1, 1982) (Estimates)  
Form EIA-87 (1981, Jan. - Dec.) (Actual)





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## Glossary of Refining Terms

### Alkylation:

A catalytic process to form alkylate, a gasoline component extremely important in the production of unleaded gasoline.

### Catalyst:

A solid or liquid substance used to increase the rate of chemical reactions but not directly involved in the reaction.

### Coking:

Thermal cracking process in which vacuum distillation unit residuum is converted to lower boiling range material and coke.

### Cracking:

A catalytic or thermal process in which large hydrocarbon molecules are divided into smaller molecules.

### Distillation:

A refining process of separating crude petroleum constituents by vaporizing and subsequent condensing of the fractions.

### Hydrodesulfurization:

A process in which hydrogen is used to remove sulfur, nitrogen, and metals from petroleum in the presence of a catalyst.

### Hydrotreating:

A process in which petroleum is reacted with hydrogen in the presence of a catalyst to remove sulfur or to hydrogenate unsaturated compounds.

### Hydrocracking:

A high temperature, high pressure catalytic process which cracks petroleum fractions in the presence of hydrogen.

### Isomerization:

Normal hydrocarbons are converted to their isomers by rearranging the molecular structure. The final product (isomerate) is used as a blending component in gasoline.

### Reforming:

A process in which octane rating of naphtha is increased by catalytic reaction or mild thermal cracking. The product, reformate, is used as a blending component in gasoline.

### Thermal Cracking:

Heating of oils to high temperatures at high pressures, which causes some atoms in larger molecules to split off and form other molecules. Cracking produces greater percentages of gasoline fractions by breaking down heavier compounds.

### Vacuum Distillation:

Separation of crude oil by distillation at below atmospheric pressure.

### Source:

U.S. Department of Energy  
Refining Siting Workbook,  
DOE/RA-33001-01,  
Washington, D.C., July, 1980.



## What is a Refinery?

Typical crude oil produced at wells is a malodorous, greenish-brown liquid. Literally hundreds of industrial, household and commercial products are at least partially composed of materials gleaned from this original crude. The conversion of crude petroleum to usable products begins in a refinery.

A petroleum refinery is essentially a manufacturing plant which converts raw oil to products that will meet stringent safety, purity and usage specifications. The most common process used to achieve this conversion is fractional distillation.

In this process, crude oil is fed continuously through heated pipes or "stills." The hot oil is discharged into a steel cylinder, about 120 feet high, called a fractionating tower. Here, all but the heaviest chemical components, or fractions, vaporize. The vapors rise up the tower, cooling as they go.

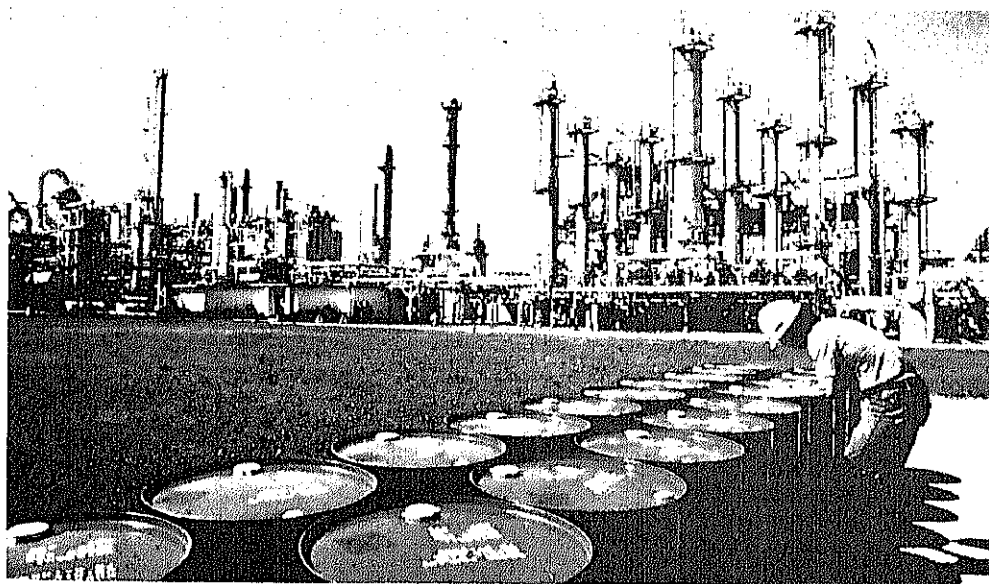
Horizontal trays set at different levels in the tower collect the vapors as they condense into liquids. At each tray, rising vapors enter perforations and "bubble caps", condensing on different trays according to the temperature at which they change from vapor to liquid. The condensed liquids are then drained off to the tray below, where higher temperatures cause re-evaporation. This cycle of evaporation, condensation and scrubbing is repeated until the desired purity is reached.

On the bottom tray of the tower products with high boiling points, such as asphalt and heavy fuel oil are found. On succeeding levels (and at lower temperatures) lubricating oil, heating oil, kerosene, gasoline and uncondensed gases are found.

Some refineries have only crude oil distillation facilities. Other refineries have a wide range of "downstream" units which crack and reform heavier molecules through the use of heat, pressure and catalysts. Additional units at these refineries treat the raw products further to remove impurities such as sulfur, salt and trace metals. Finally, these liquids are blended together, with or without additives, to produce the products desired.

Probably no two refineries in the United States are alike, since each originally was designed to process a certain type, or types, of crude oil and to produce a selected slate of products. Many are designed to produce a high yield of gasoline, the major product, while others are designed to produce fuel oils.

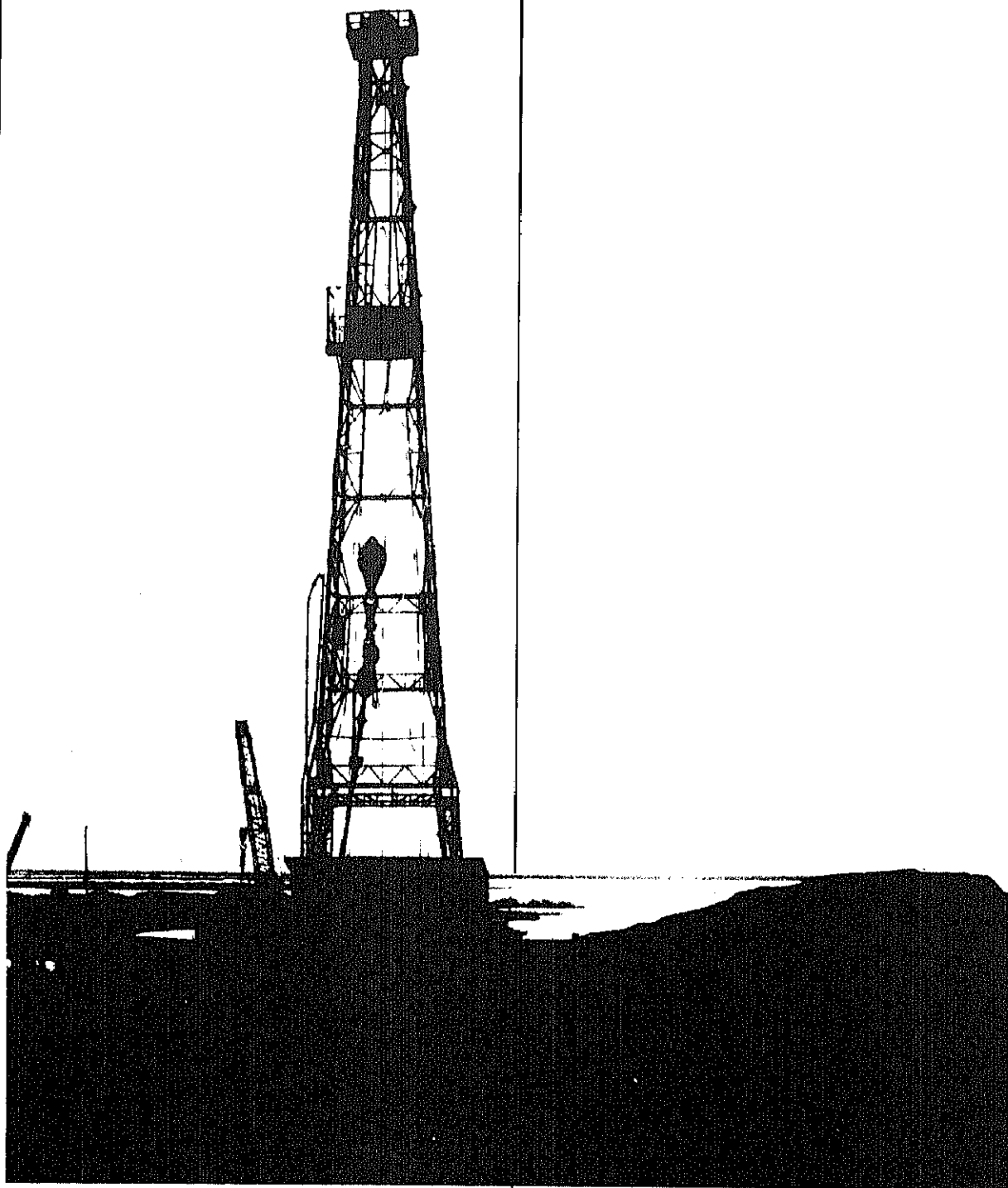
Many refineries, in addition to processing crude oil, use a wide range of liquids recovered from natural gas as raw materials. Although some of these liquids, particularly the heavier ones, go through distillation and "downstream" facilities at refineries, others are used in blending operations to produce lighter fuel products such as motor gasoline.





# Summary Statistics

1981 Statistics Contained In This Section Are Final. They have been extracted from the Petroleum Supply Annual which is scheduled to be released in July 1982.



# Crude Oil<sup>1</sup> and Petroleum Products Overview

		Field Production			Stock Withdrawal <sup>2</sup>			Ending Stocks <sup>3</sup>
		Total Domestic <sup>4</sup>	Crude Oil	Natural Gas Plant Production	Crude Oil <sup>5</sup>	Petroleum Products	Petroleum Products Supplied	Crude Oil <sup>5</sup> and Petroleum Products
Thousand Barrels per Day								Millions of Barrels
1973	AVERAGE	10,975	9,208	1,738	11	-146	17,308	1,008
1974	AVERAGE	10,498	8,774	1,688	-62	-117	16,653	1,074
1975	AVERAGE	10,045	8,375	1,633	-17	-145	16,322	1,133
1976	AVERAGE	9,774	8,132	1,603	-39	96	17,461	1,112
1977	AVERAGE	9,913	8,245	1,618	-170	-378	18,431	1,312
1978	AVERAGE	10,328	8,707	1,567	-78	172	18,847	1,278
1979	AVERAGE	10,179	8,552	1,584	-148	-25	18,513	1,341
1980	January	10,377	8,675	1,648	-594	270	18,851	1,351
	February	10,402	8,705	1,656	-292	563	18,817	1,343
	March	10,303	8,698	1,568	-47	-99	17,377	1,348
	April	10,356	8,685	1,630	-412	-229	16,784	1,367
	May	10,298	8,635	1,615	-117	-520	16,238	1,387
	June	10,164	8,554	1,561	65	-869	16,187	1,411
	July	10,113	8,547	1,524	88	-556	16,008	1,425
	August	9,974	8,414	1,519	-274	-473	15,753	1,449
	September	10,184	8,619	1,515	307	-259	16,598	1,447
	October	10,092	8,532	1,516	-191	756	16,995	1,430
	November	10,109	8,495	1,571	-8	-84	16,702	1,432
	December	10,204	8,606	1,560	304	993	18,410	1,392
	AVERAGE	10,214	8,597	1,573	-98	-42	17,056	
1981	January	10,231	8,540	1,652	50	1,159	18,430	1,388
	February	10,294	8,604	1,653	-278	250	16,989	1,389
	March	10,272	8,613	1,624	-632	224	15,907	1,401
	April	10,195	8,557	1,599	-595	148	15,350	1,415
	May	10,160	8,501	1,593	-391	-374	15,353	1,438
	June	10,287	8,629	1,594	-135	406	16,095	1,430
	July	10,098	8,500	1,548	-360	91	15,682	1,439
	August	10,243	8,583	1,614	397	-999	15,263	1,457
	September	10,281	8,604	1,612	-285	-341	15,655	1,476
	October	10,225	8,563	1,598	-760	477	15,822	1,485
	November	10,269	8,586	1,630	-325	-233	15,593	1,501
	December	10,220	8,585	1,590	-170	745	16,596	1,484
	AVERAGE	10,230	8,572	1,609	-290	130	16,058	
1982	January	10,257	8,669	1,548	-236	1,129	15,890	1,461
	February	10,261	8,690	1,524	-216	1,268	15,941	1,431
	March	10,212	8,597	1,570	-65	1,049	15,560	1,401
	April*	10,296	R 8,652	1,588	R107	R1,594	R16,048	R1,350
	May**	NA	8,688	NA	117	102	14,789	1,352
	AVERAGE	NA	8,659	NA	-57	1,021	15,638	

<sup>1</sup> Includes lease condensate.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Ending stocks for 1973-1979 are totals as of December 31.

<sup>4</sup> Includes crude oil, natural gas plant production, other hydrocarbons and alcohol.

<sup>5</sup> Includes stocks located in the Strategic Petroleum Reserve.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 5.1.

\*\* Preliminary statistics. See Explanatory Note 2.7.

Note: Beginning in January 1975, the Bureau of Mines, Dept. of Interior, expanded its stocks coverage to include an additional 100 bulk terminal operators.

Geographic coverage: The 50 United States and the District of Columbia including adjacent areas of the outer continental shelf, excluding the Hawaiian Foreign Trade Zone.

Sources: See "Sources" at the end of this section.

# Crude Oil<sup>1</sup> and Petroleum Products Overview ( continued )

		Imports <sup>2</sup>			Exports <sup>3</sup>			Net <sup>5</sup> Imports
		Total	Crude Oil <sup>4</sup>	Petroleum Products	Total	Crude Oil	Petroleum Products	
Thousand Barrels per Day								
1973	AVERAGE	6,256	3,244	3,012	231	2	229	6,025
1974	AVERAGE	6,112	3,477	2,635	221	3	218	5,892
1975	AVERAGE	6,056	4,105	1,951	209	6	204	5,846
1976	AVERAGE	7,313	5,287	2,026	223	8	215	7,090
1977	AVERAGE	8,807	6,615	2,193	243	50	193	8,565
1978	AVERAGE	8,363	6,356	2,008	362	158	204	8,002
1979	AVERAGE	8,456	6,519	1,937	472	235	237	7,984
1980	January	8,598	6,406	2,192	550	322	228	8,048
	February	7,945	6,013	1,931	558	332	227	7,386
	March	7,452	5,695	1,757	573	330	243	6,879
	April	7,106	5,598	1,508	434	192	241	6,672
	May	6,579	5,106	1,472	591	326	266	5,987
	June	6,894	5,480	1,414	654	365	289	6,240
	July	6,257	4,843	1,414	531	238	293	5,727
	August	6,192	4,803	1,389	319	78	241	5,873
	September	6,239	4,707	1,532	557	322	235	5,682
	October	6,379	4,768	1,611	598	309	288	5,781
	November	6,408	4,680	1,728	549	289	260	5,858
	December	6,894	5,082	1,812	622	343	279	6,272
		AVERAGE	6,909	5,263	1,646	544	287	258
1981	January	6,827	4,932	1,895	558	339	219	6,270
	February	6,772	4,873	1,899	569	198	371	6,203
	March	6,028	4,521	1,507	586	210	376	5,442
	April	5,668	4,338	1,330	570	198	372	5,098
	May	5,775	4,287	1,489	595	312	283	5,180
	June	5,435	4,061	1,375	420	123	297	5,015
	July	5,816	4,296	1,521	571	257	314	5,245
	August	5,767	4,179	1,588	644	204	440	5,123
	September	6,365	4,740	1,624	519	194	325	5,845
	October	5,959	4,380	1,579	738	226	512	5,221
	November	5,741	4,046	1,695	701	278	423	5,041
	December	5,843	4,137	1,706	656	189	467	5,187
		AVERAGE	5,996	4,396	1,599	595	228	367
1982	January	5,232	3,648	1,585	829	238	591	4,404
	February	4,691	2,949	1,742	804	304	499	3,887
	March	4,461	2,856	1,606	882	321	561	3,579
	April*	R 4,286	R 2,813	R 1,474	786	174	611	3,501
	May**	4,446	3,222	1,224	NA	NA	NA	NA
	AVERAGE	4,624	3,102	1,522	NA	NA	NA	NA

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Includes shipments from United States possessions and territories.

<sup>3</sup> Includes shipments to United States possessions and territories.

<sup>4</sup> Includes crude oil for storage in the Strategic Petroleum Reserve.

<sup>5</sup> Net Imports = Imports minus Exports.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

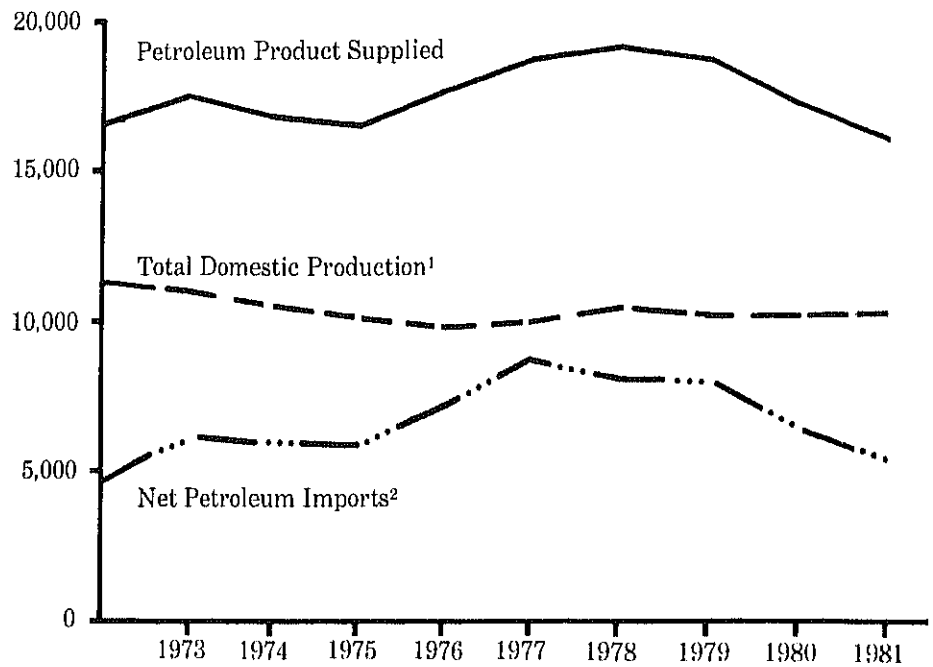
\* See Explanatory Note 5.1.

\*\* Preliminary Statistics. See Explanatory Note 2.7.

Geographic coverage: The 50 United States and the District of Columbia including adjacent areas of the outer continental shelf, excluding the Hawaiian Foreign Trade Zone.

Sources: See "Sources" at the end of this section.

### Petroleum Overview, Annual (Thousand Barrels per Day)



<sup>1</sup>Includes crude oil and natural gas plant production.

<sup>2</sup>Includes SPR imports.

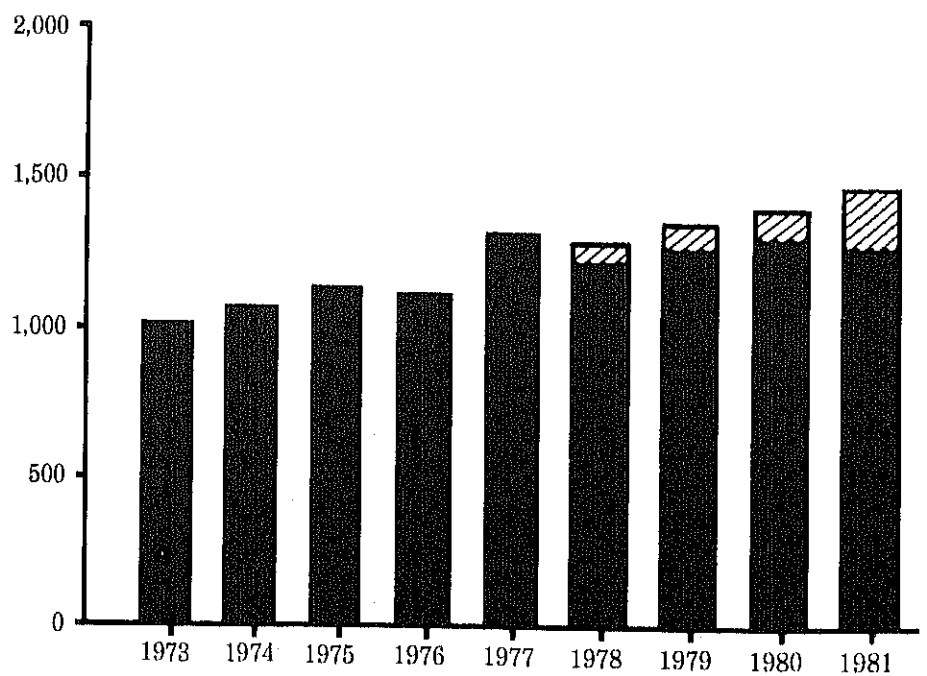
Source table: "Crude Oil and Petroleum Products Overview."

### Crude Oil and Petroleum Products Ending Stocks, Annual (Millions of Barrels)

#### Legend

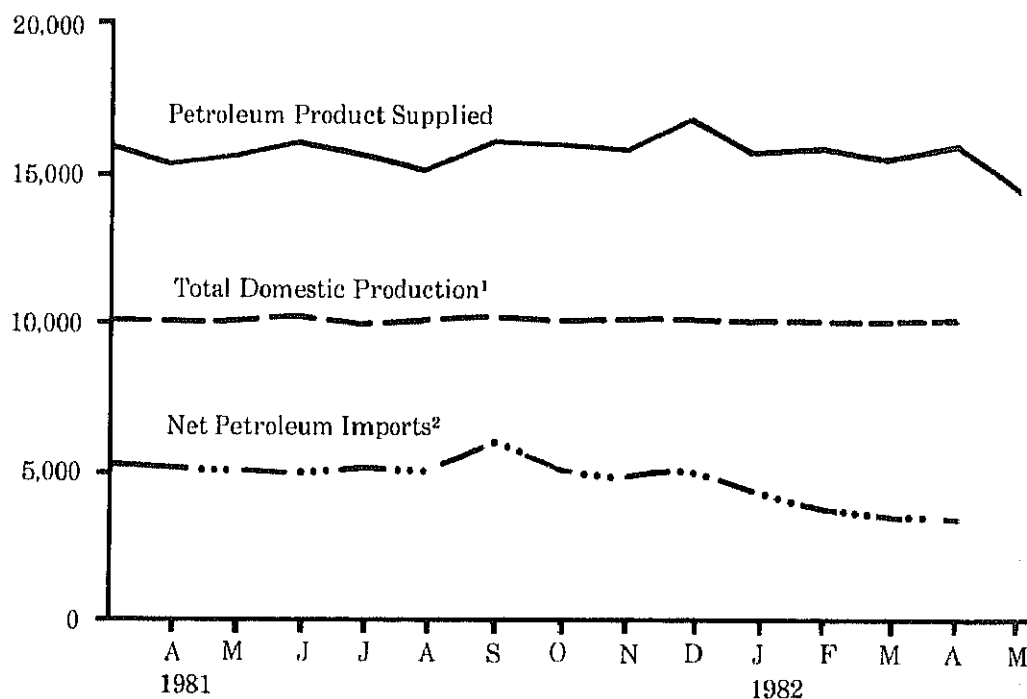
▨ SPR Crude Oil

■ Crude Oil and Petroleum Products, Excluding SPR



Source tables: "Crude Oil and Petroleum Products Overview" and "Crude Oil Supply and Disposition."

## Petroleum Overview, Monthly (Thousand Barrels per Day)



<sup>1</sup>Includes crude oil and natural gas plant production.

<sup>2</sup>Includes SPR imports.

Source table: "Crude Oil and Petroleum Products Overview."

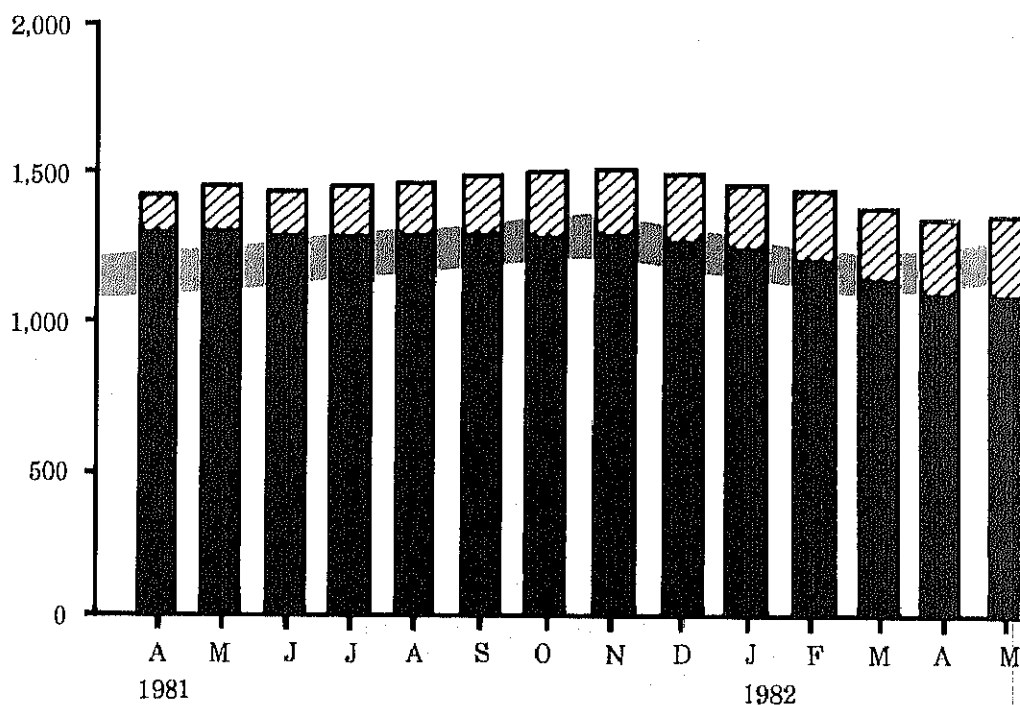
## Crude Oil and Petroleum Product Ending Stocks, Monthly (Millions of Barrels)

### Legend

▨ SPR Crude Oil

■ Crude Oil and Petroleum Products, Excluding SPR

▤ Average Stock Range<sup>1</sup>



<sup>1</sup>Average stock range (excluding SPR) based on 3 years of data. See Explanatory Note 2.5.

Source tables: "Crude Oil and Petroleum Products Overview" and "Crude Oil Supply and Disposition."



# Crude Oil<sup>1</sup> Supply and Disposition

		Supply						
		Field Production		Imports <sup>2</sup>			Stock Withdrawal <sup>3</sup>	
		Total Domestic	Alaskan	Total	SPR <sup>4</sup>	Other	SPR <sup>4</sup>	Other
		Thousand Barrels per Day						
1973	AVERAGE	9,208	198	3,244		3,244		11
1974	AVERAGE	8,774	193	3,477		3,477		-62
1975	AVERAGE	8,375	191	4,105		4,105		-17
1976	AVERAGE	8,132	173	5,287		5,287		-39
1977	AVERAGE	8,245	464	6,615	21	6,594	-20	-150
1978	AVERAGE	8,707	1,229	6,356	162	6,195	-163	84
1979	AVERAGE	8,552	1,401	6,519	67	6,452	-67	-81
1980	January	8,675	1,634	6,406	0	6,406	0	-594
	February	8,705	1,630	6,013	0	6,013	0	-292
	March	8,698	1,647	5,695	0	5,695	0	-47
	April	8,685	1,649	5,598	0	5,598	0	-412
	May	8,635	1,627	5,106	0	5,106	0	-117
	June	8,554	1,626	5,480	0	5,480	0	65
	July	8,547	1,612	4,843	0	4,843	0	88
	August	8,414	1,612	4,803	0	4,803	0	-274
	September	8,619	1,610	4,707	54	4,653	-54	361
	October	8,532	1,588	4,768	131	4,637	-123	-68
	November	8,495	1,561	4,680	142	4,538	-189	181
	December	8,606	1,602	5,082	198	4,884	-177	481
	AVERAGE	8,597	1,617	5,263	44	5,219	-45	-52
1981	January	8,540	1,606	4,932	106	4,826	-151	201
	February	8,604	1,619	4,873	80	4,793	-127	-150
	March	8,613	1,618	4,521	140	4,382	-155	-477
	April	8,557	1,608	4,338	272	4,066	-444	-151
	May	8,501	1,580	4,287	386	3,901	-513	122
	June	8,629	1,632	4,061	318	3,743	-434	299
	July	8,500	1,605	4,296	175	4,121	-324	-36
	August	8,583	1,602	4,179	257	3,922	-372	769
	September	8,604	1,607	4,740	435	4,305	-486	201
	October	8,563	1,596	4,380	453	3,927	-501	-259
	November	8,586	1,614	4,046	271	3,774	-259	-66
	December	8,585	1,623	4,137	165	3,971	-252	82
	AVERAGE	8,572	1,609	4,396	256	4,141	-336	46
1982	January	8,669	1,712	3,648	170	3,478	-159	-77
	February	8,890	1,715	2,949	159	2,790	-213	-3
	March	8,597	1,702	2,856	185	2,671	-235	170
	April*	R 8,652	R 1,687	R 2,813	R 190	R 2,623	R -233	R 341
	May**	8,688	1,702	3,222	198	3,024	-204	320
	AVERAGE	8,659	1,703	3,102	181	2,921	-209	152

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Includes shipments from United States possessions and territories.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup> Strategic Petroleum Reserve.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 5.2.

\*\* Preliminary statistics. See Explanatory Note 2.7.

Geographic coverage: The 50 United States and the District of Columbia including adjacent areas of the outer continental shelf, excluding the Hawaiian Foreign Trade Zone.

Sources: See "Sources" at the end of this section.

Crude Oil<sup>1</sup> Supply and Disposition ( continued )

		Supply (Continued)		Disposition		Ending Stocks <sup>2</sup>		
		Unac- counted for Crude Oil	Crude Used Directly and Losses	Refinery Inputs	Exports <sup>3</sup>	Total Crude Oil	SPR <sup>4</sup>	Other Primary
		Thousand Barrels per Day				Millions of Barrels		
1973	AVERAGE	3	-32	12,431	2	242		242
1974	AVERAGE	-25	-28	12,133	3	265		265
1975	AVERAGE	17	-30	12,442	6	271		271
1976	AVERAGE	77	-33	13,416	8	285		285
1977	AVERAGE	-6	-30	14,602	50	348	7	340
1978	AVERAGE	-57	-30	14,739	158	376	67	309
1979	AVERAGE	-11	-29	14,648	235	430	91	339
1980	January	166	-31	14,301	322	449	91	358
	February	124	-31	14,187	332	457	91	366
	March	-278	-30	13,709	330	459	91	367
	April	-165	-29	13,484	192	471	91	380
	May	55	-28	13,326	326	475	91	383
	June	1	-30	13,705	365	473	91	381
	July	52	-29	13,264	238	470	91	379
	August	147	-28	12,984	78	478	91	387
	September	27	-26	13,313	322	469	93	376
	October	-3	-25	12,772	309	475	97	379
	November	266	-26	13,119	289	475	102	373
	December	24	-26	13,648	343	466	108	358
	AVERAGE	34	-28	13,481	287			
1981	January	113	-49	13,247	339	486	112	374
	February	-41	-58	12,902	198	494	116	378
	March	154	-63	12,383	210	514	121	393
	April	51	-62	12,091	198	532	134	397
	May	286	-62	12,309	312	544	150	394
	June	49	-65	12,415	123	548	163	385
	July	147	-65	12,261	257	559	173	386
	August	16	-63	12,908	204	547	185	362
	September	-295	-65	12,505	194	555	199	356
	October	166	-66	12,057	226	579	215	364
	November	279	-68	12,240	278	589	223	366
	December	52	-67	12,349	189	594	230	363
	AVERAGE	83	-63	12,470	228			
1982	January	-138	-66	11,638	238	606	235	371
	February	199	-66	11,252	304	612	241	371
	March	278	-68	11,277	321	614	249	366
	April*	56	-68	R 11,386	174	R 611	R 256	R 355
	May**	NA	NA	11,804	NA	619	261	359
AVERAGE		NA	NA	11,476	NA			

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Ending stocks for 1973-1979 are totals as of December 31.

<sup>3</sup> Includes shipments to United States possessions and territories.

<sup>4</sup> Strategic Petroleum Reserve.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

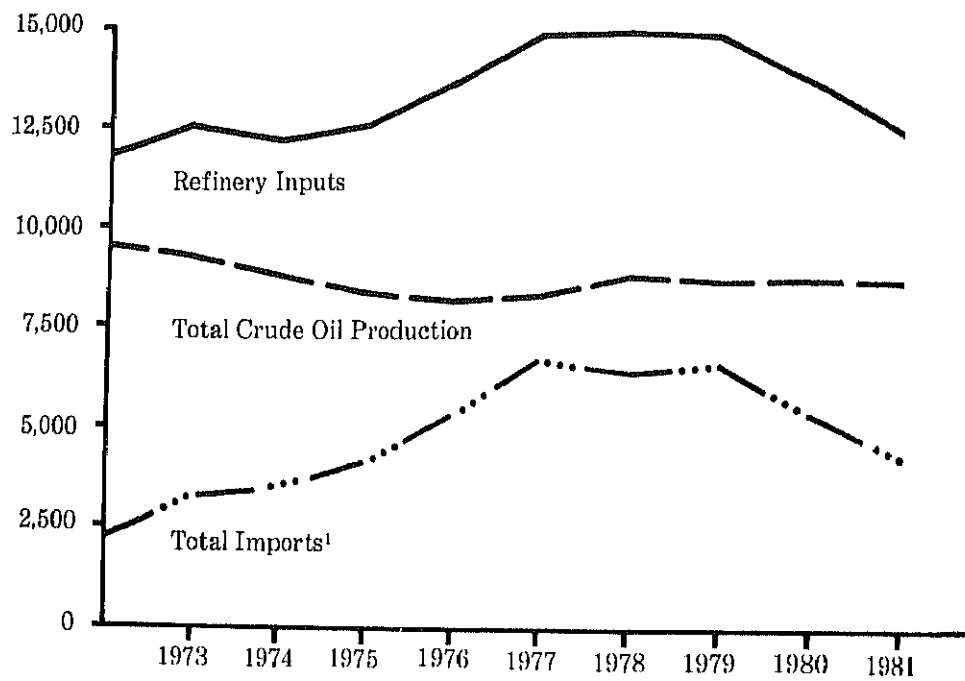
\* See Explanatory Note 5.2.

\*\* Preliminary statistics. See Explanatory Note 2.7.

Geographic coverage: The 50 United States and the District of Columbia including adjacent areas of the outer continental shelf, excluding the Hawaiian Foreign Trade Zone.

Sources: See "Sources" at the end of this section.

### Crude Oil Supply and Disposition, Annual (Thousand Barrels per Day)



¹Includes SPR imports.

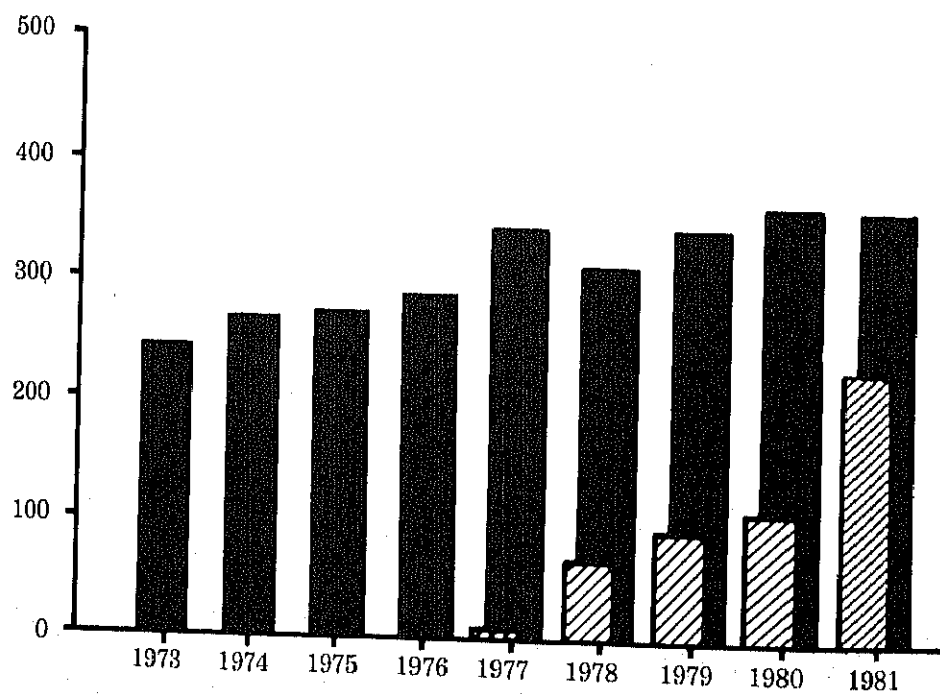
Source table: "Crude Oil Supply and Disposition."

### Crude Oil Ending Stocks, Annual (Millions of Barrels)

#### Legend

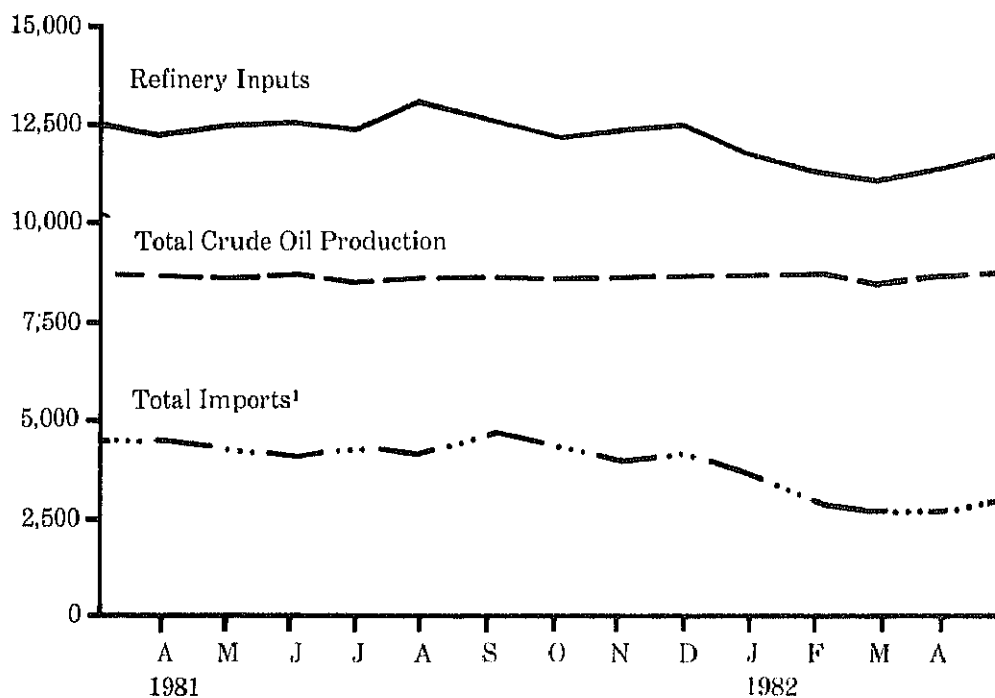
▨ SPR

■ Other Primary



Source table: "Crude Oil Supply and Disposition."

## Crude Oil Supply and Disposition, Monthly (Thousand Barrels per Day)



¹Includes SPR imports.

Source table: "Crude Oil Supply and Disposition."

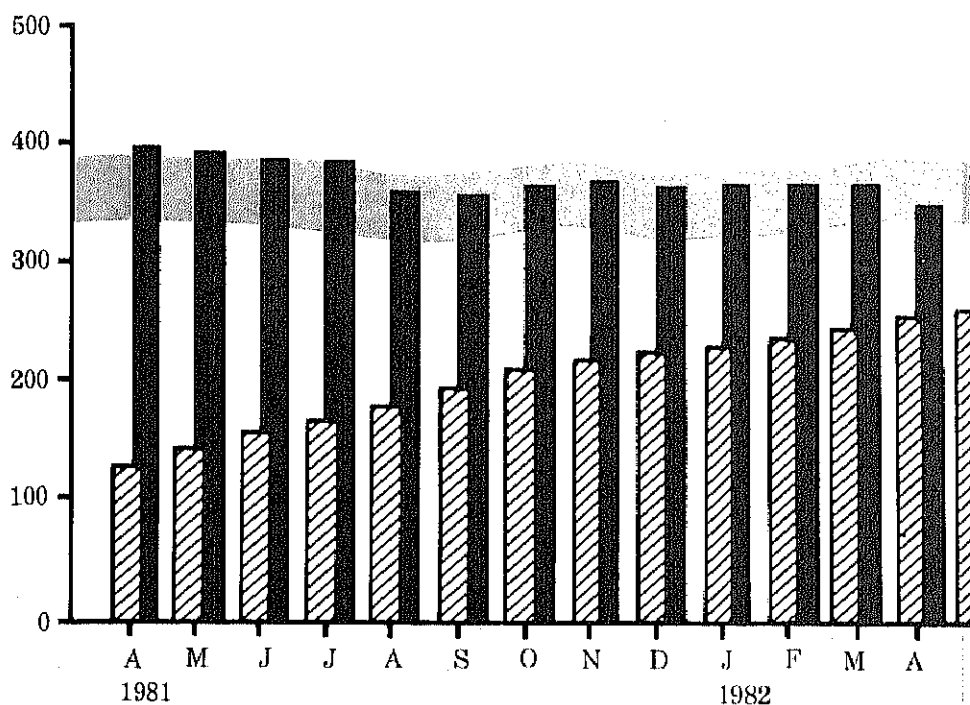
## Crude Oil Ending Stocks, Monthly (Millions of Barrels)

### Legend

SPR

Other Primary

Average Stock Range¹



¹Average stock range (excluding SPR) based on 3 years of data. See Explanatory Note 2.5.

Source table: "Crude Oil Supply and Disposition."

# Finished Motor Gasoline Supply and Disposition

		Supply			Disposition				Ending Stocks <sup>1</sup>		
		Total Production	Imports <sup>2</sup>	Stock With-drawal <sup>2 3</sup>	Exports	Product Supplied			Total Motor Gasoline <sup>4</sup>	Finished Motor Gasoline	
						Total	Unleaded <sup>5</sup>	Unleaded			
Thousand Barrels per Day							Percent of Total	Millions of Barrels			
1973	AVERAGE	6,535	134	9	4	6,674	NA	NA	209		
1974	AVERAGE	6,360	204	-24	2	6,537	NA	NA	218		
1975	AVERAGE	6,520	184	-28	2	6,675	NA	NA	235		
1976	AVERAGE	6,841	131	10	3	6,978	NA	NA	231		
1977	AVERAGE	7,033	217	-72	2	7,177	1,976	27.5	258		
1978	AVERAGE	7,169	190	54	1	7,412	2,521	34.0	238		
1979	AVERAGE	6,852	181	2	( <sup>5</sup> )	7,034	2,798	39.8	237		
1980	January	6,991	141	-809	1	6,323	2,718	43.0	262		
	February	6,866	154	-423	( <sup>5</sup> )	6,596	2,969	45.0	275		
	March	6,519	155	-267	( <sup>5</sup> )	6,406	3,032	47.3	283		
	April	6,284	155	362	1	6,800	3,021	44.4	272		
	May	6,316	132	283	1	6,729	2,980	44.3	263		
	June	6,569	148	-59	1	6,657	3,099	46.6	265		
	July	6,465	149	-132	3	6,743	3,131	46.4	261		
	August	6,452	141	56	1	6,648	3,135	47.2	259		
	September	6,383	106	28	7	6,510	3,054	46.9	258		
	October	6,131	152	380	1	6,662	3,110	46.7	247		
	November	6,467	126	-359	( <sup>5</sup> )	6,234	3,123	50.1	257		
	December	6,644	121	-133	1	6,632	3,421	51.6	261		
		AVERAGE	6,506	140	-66	1	6,579	3,067	46.6		
	1981	January	6,715	138	-421	( <sup>5</sup> )	6,431	3,141	48.8	276	227
February		6,308	111	-118	1	6,301	3,095	49.1	284	230	
March		6,213	171	-81	( <sup>5</sup> )	6,303	3,097	49.1	285	232	
April		6,114	186	303	( <sup>5</sup> )	6,602	3,284	49.7	272	223	
May		6,122	150	344	1	6,615	3,115	47.1	259	213	
June		6,220	186	622	1	7,028	3,419	48.6	242	194	
July		6,405	151	268	( <sup>5</sup> )	6,823	3,424	50.2	228	186	
August		6,611	124	-95	3	6,637	3,344	50.4	233	189	
September		6,564	169	-70	2	6,662	3,338	50.1	237	191	
October		6,426	147	7	3	6,578	3,257	49.5	236	190	
November		6,564	148	-338	1	6,373	3,198	50.2	248	201	
December		6,586	197	-91	11	6,681	3,444	51.5	253	203	
		AVERAGE	6,405	157	28	2	6,588	3,264	49.5		
1982		January	6,181	114	-358	18	5,920	3,033	51.2	262	214
	February	5,917	133	28	8	6,070	3,145	51.8	262	213	
	March	6,004	183	469	44	6,612	3,396	51.4	248	199	
	April*	R 6,104	177	641	33	R 6,890	3,494	50.7	R 223	180	
	May**	6,090	NA	NA	NA	6,585	NA	NA	209	NA	
		AVERAGE	6,062	NA	NA	NA	6419	NA	NA		

<sup>1</sup> Ending stocks for 1973-1979 are totals as of December 31.

<sup>2</sup> Beginning in 1981 excludes blending components.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup> Includes motor gasoline blending components.

<sup>5</sup> Includes gasohol.

Totals may not equal sum of components due to independent rounding.

(<sup>5</sup>) = Less than 500 barrels. NA = Not available. R = Revised data.

\* See Explanatory Note 5.3.

\*\* Preliminary statistics. See Explanatory Note 2.7.

Notes: Beginning in January 1981, the Energy Information Administration modified survey forms, definitions, and processing procedures. See Explanatory Note 4 on Changes for the effects on motor gasoline statistics.

Beginning in January 1975, the Bureau of Mines, Dept. of the Interior, expanded its stocks coverage to include an additional 100 bulk terminal operators.

Geographic coverage: The 50 United States and the District of Columbia including adjacent areas of the outer continental shelf, excluding the Hawaiian Foreign Trade Zone.

Sources: See "Sources" at the end of this section.

# Distillate Fuel Oil Supply and Disposition

		Supply				Disposition		Ending Stocks <sup>1</sup>
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly	Exports	Product Supplied	
		Thousand Barrels per Day						Millions of Barrels
1973	AVERAGE	2,822	392	-115	2	9	3,092	196
1974	AVERAGE	2,669	289	-9	2	2	2,948	200
1975	AVERAGE	2,654	155	40	2	1	2,851	209
1976	AVERAGE	2,924	146	62	1	1	3,133	186
1977	AVERAGE	3,278	250	-176	1	1	3,352	250
1978	AVERAGE	3,167	173	93	1	3	3,432	216
1979	AVERAGE	3,153	193	-34	1	3	3,311	229
1980	January	3,014	179	526	1	7	3,714	212
	February	2,766	237	716	1	8	3,712	192
	March	2,558	193	445	1	19	3,179	178
	April	2,461	154	21	2	2	2,635	177
	May	2,474	126	-199	1	1	2,402	183
	June	2,647	108	-439	1	( <sup>a</sup> )	2,317	197
	July	2,690	117	-557	2	3	2,249	214
	August	2,462	77	-403	2	( <sup>a</sup> )	2,137	226
	September	2,686	101	-201	2	( <sup>a</sup> )	2,587	232
	October	2,590	115	215	1	( <sup>a</sup> )	2,920	226
	November	2,703	133	111	1	( <sup>a</sup> )	2,949	222
	December	2,891	166	556	1	( <sup>a</sup> )	3,615	205
	AVERAGE	2,662	142	64	1	3	2,866	
1981	January	2,989	273	836	11	( <sup>a</sup> )	4,109	179
	February	2,809	325	246	11	17	3,373	173
	March	2,484	147	264	9	( <sup>a</sup> )	2,904	164
	April	2,418	116	-9	10	3	2,532	165
	May	2,454	179	-232	10	( <sup>a</sup> )	2,411	172
	June	2,501	225	-270	9	( <sup>a</sup> )	2,464	180
	July	2,395	179	-204	10	2	2,378	186
	August	2,656	174	-450	8	( <sup>a</sup> )	2,388	200
	September	2,610	129	-235	10	1	2,513	207
	October	2,485	119	197	9	5	2,803	201
	November	2,716	124	36	11	6	2,880	200
	December	2,856	95	277	11	26	3,212	192
	AVERAGE	2,613	173	38	10	5	2,829	
1982	January	2,615	96	780	10	90	3,410	166
	February	2,447	130	689	11	90	3,187	147
	March	2,294	48	612	10	84	2,881	128
	April*	R 2,357	R 59	R 631	13	64	R 2,996	R 109
	May**	2,633	82	-60	NA	NA	2,605	108
	AVERAGE	2,470	82	527	NA	NA	3013	

<sup>1</sup> Ending stocks for 1973 - 1979 are totals as of December 31.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease. Totals may not equal sum of components due to independent rounding.

(<sup>a</sup>) = Less than 500 barrels per day. NA = Not available. R = Revised data.

\* See Explanatory Note 5.4.

\*\* Preliminary Statistics. See Explanatory Note 2.7.

Notes: Beginning in January 1981, the Energy Information Administration modified survey forms, definitions, and processing procedures.

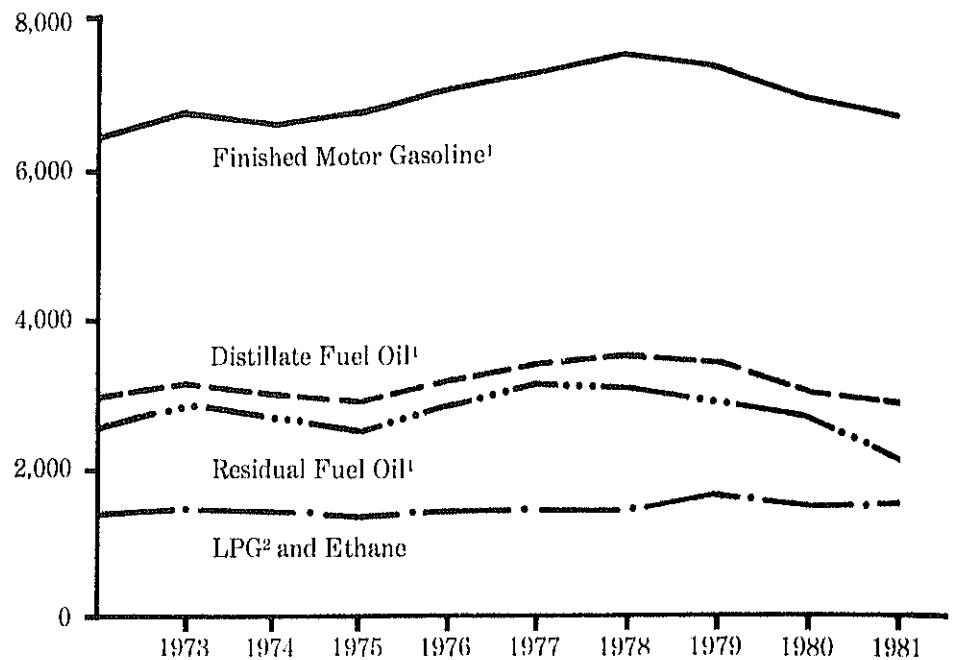
See Explanatory Note 4 on changes for the effects on residual fuel oil statistics.

Beginning in January 1975, The Bureau of Mines, Dept. of the Interior, expanded its stocks coverage to include an additional 100 bulk terminal operators.

Geographic Coverage: The 50 United States and the District of Columbia including adjacent areas of the outer continental shelf, excluding the Hawaiian Foreign Trade Zone.

Sources: See "Sources" at the end of this section.

## Products Supplied, Annual (Thousand Barrels per Day)



<sup>1</sup>Figures for 1979 and 1980 recast to account for data system changes in 1981. See Explanatory Note 4.

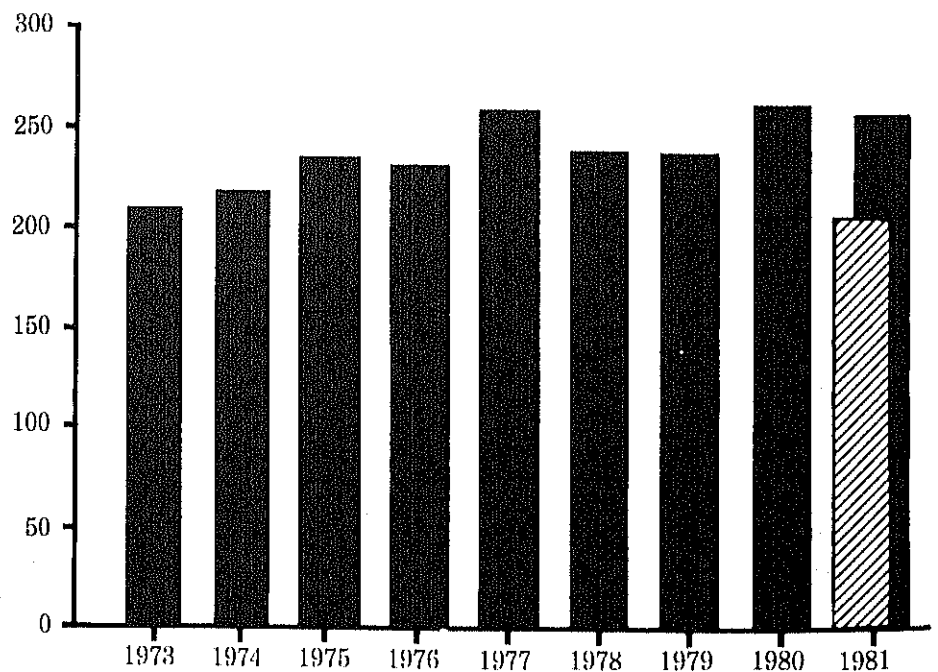
<sup>2</sup>Liquefied Petroleum Gases.

Source tables: "Finished Motor Gasoline Supply and Disposition," "Distillate Fuel Oil Supply and Disposition," "Residual Fuel Oil Supply and Disposition," "Liquefied Petroleum Gases and Ethane Supply and Disposition."

## Motor Gasoline<sup>1</sup> Ending Stocks, Annual (Millions of Barrels)

### Legend

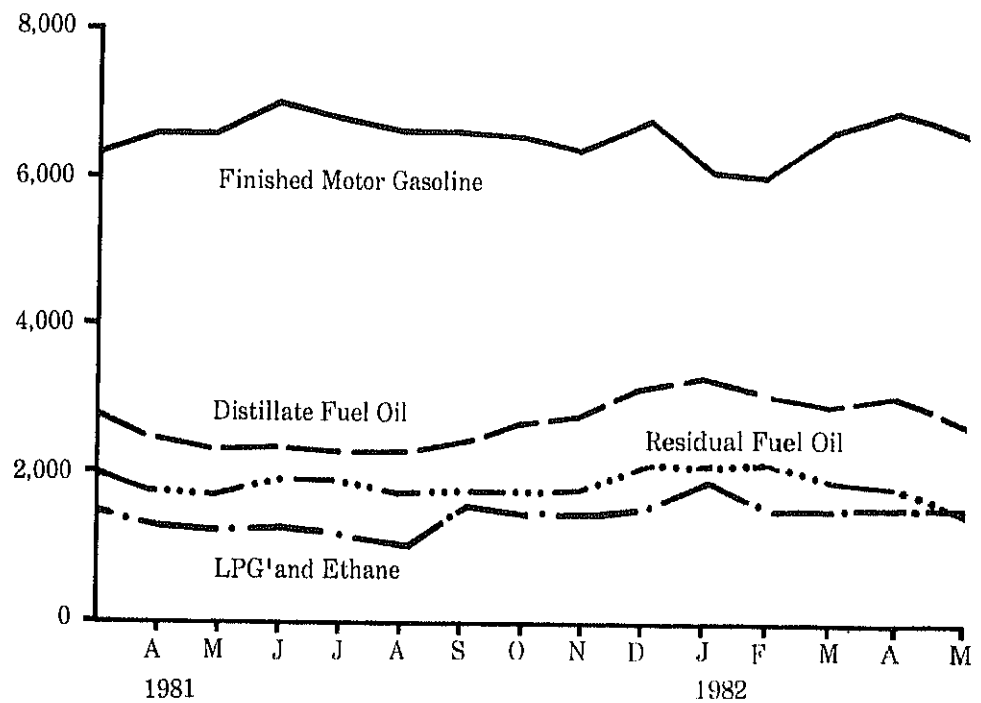
- Total
- ▨ Finished



<sup>1</sup>Includes finished motor gasoline blending components.

Source table: "Finished Motor Gasoline Supply and Disposition."

### Products Supplied, Monthly (Thousand Barrels per Day)



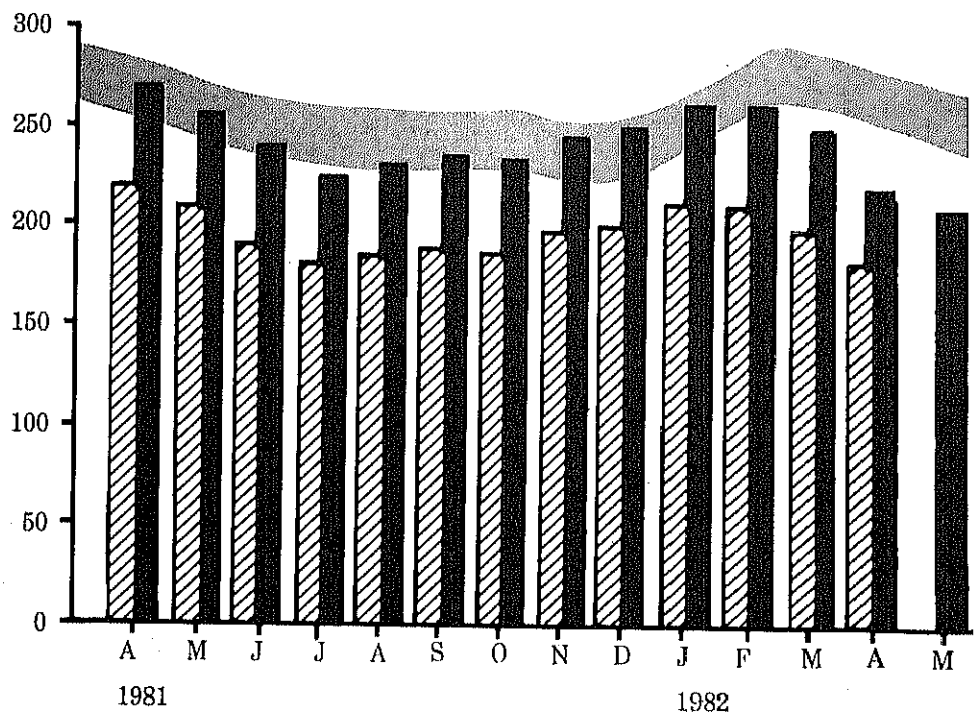
<sup>1</sup>Liquefied Petroleum Gases.

Source tables: "Finished Motor Gasoline Supply and Disposition," "Distillate Fuel Oil Supply and Disposition," "Residual Fuel Oil Supply and Disposition," "Liquefied Petroleum Gases and Ethane Supply and Disposition."

### Motor Gasoline Ending Stocks, Monthly (Millions of Barrels)

#### Legend

- Total Motor Gasoline<sup>1</sup>
- ▨ Finished Motor Gasoline
- ▩ Average Stock Range<sup>2</sup>



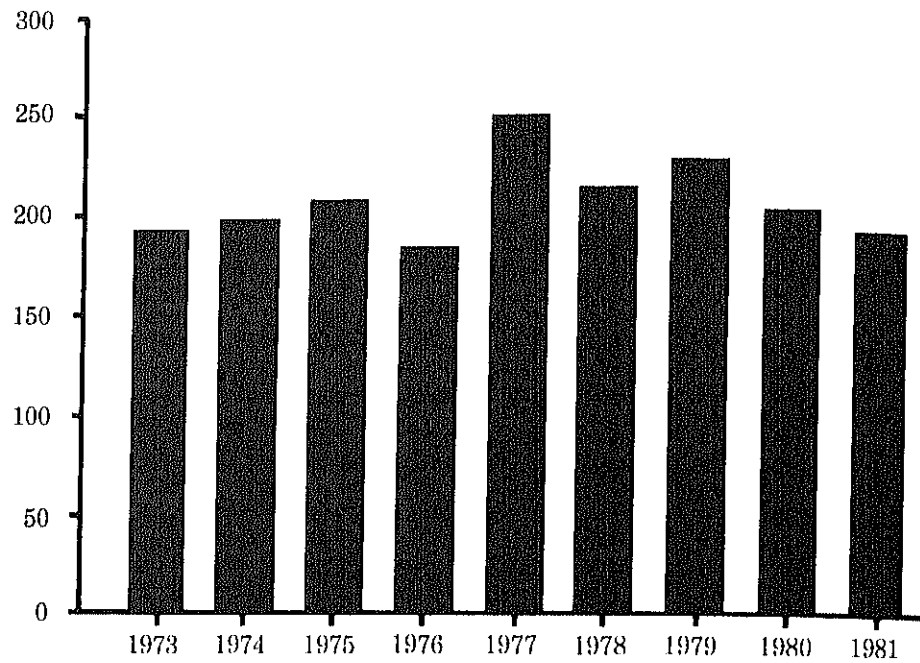
<sup>1</sup>Includes finished motor gasoline blending components.

<sup>2</sup>Average stock range for total motor gasoline based on 3 years of data. See Explanatory Note 2.5.

Source table: "Finished Motor Gasoline Supply and Disposition."

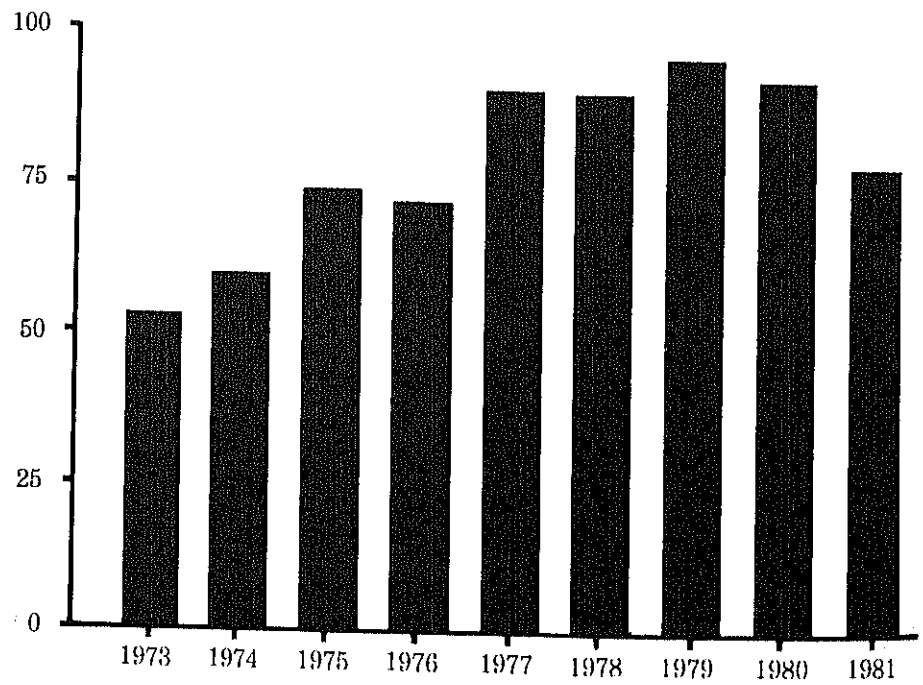


### Distillate Fuel Oil Ending Stocks, Annual (Millions of Barrels)



Source table: "Distillate Fuel Oil Supply and Disposition."


### Residual Fuel Oil Ending Stocks, Annual (Millions of Barrels)

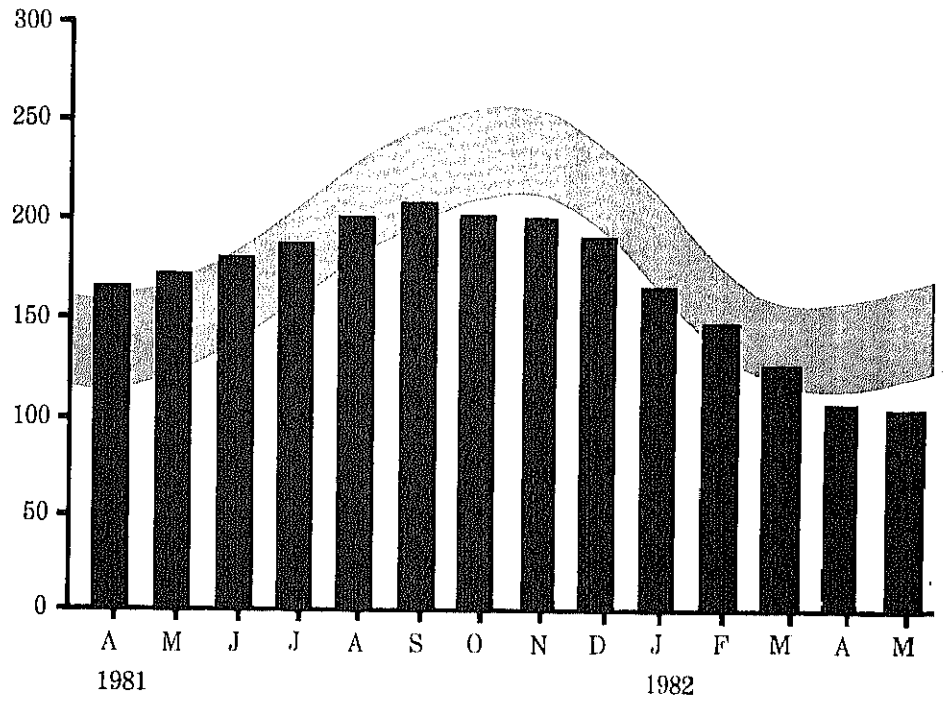


Source table: "Residual Fuel Oil Supply and Disposition."

## Distillate Fuel Oil Ending Stocks, Monthly (Millions of Barrels)

### Legend

 Average Stock Range<sup>1</sup>




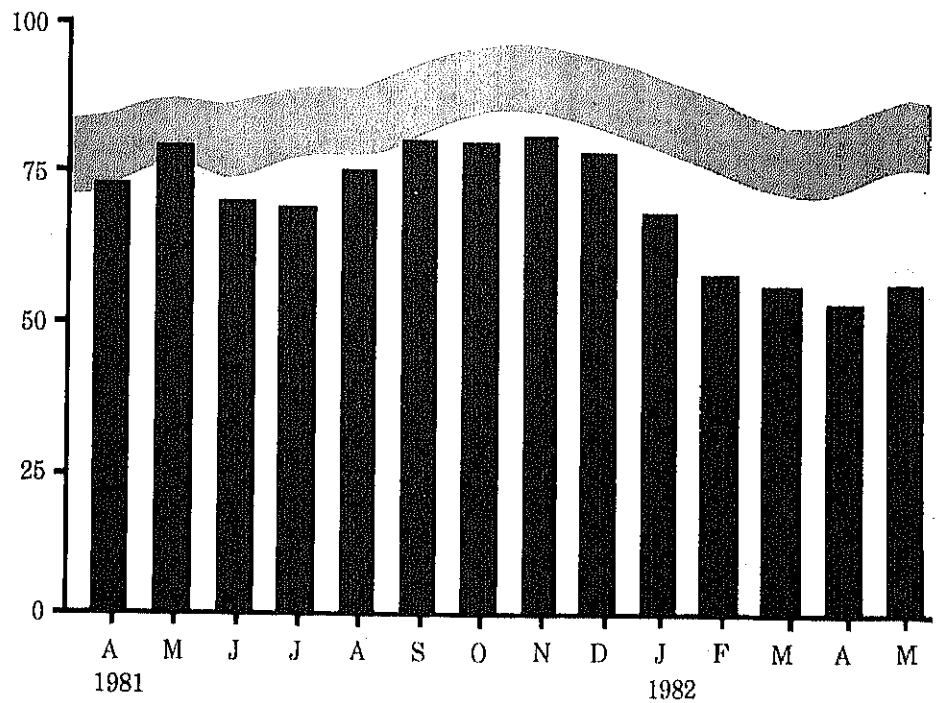
<sup>1</sup>Average stock range based on 3 years of data. See Explanatory Note 2.5.

Source table: "Distillate Fuel Oil Supply and Disposition."

## Residual Fuel Oil Ending Stocks, Monthly (Millions of Barrels)

### Legend

 Average Stock Range<sup>1</sup>



<sup>1</sup>Average stock range based on 3 years of data. See Explanatory Note 2.5.

Source table: "Residual Fuel Oil Supply and Disposition."

# Residual Fuel Oil Supply and Disposition

		Supply				Disposition		Ending Stocks <sup>1</sup>
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly	Exports	Products Supplied	
		Thousand Barrels per Day						
								Millions of Barrels
1973	AVERAGE	971	1,853	5	17	23	2,822	53
1974	AVERAGE	1,070	1,587	-17	13	14	2,639	60
1975	AVERAGE	1,235	1,223	2	15	15	2,462	74
1976	AVERAGE	1,377	1,413	5	17	12	2,801	72
1977	AVERAGE	1,754	1,359	-48	13	6	3,071	90
1978	AVERAGE	1,667	1,355	-1	13	13	3,023	90
1979	AVERAGE	1,687	1,151	-15	12	9	2,826	96
1980	January	1,771	1,338	-51	14	5	3,067	97
	February	1,773	1,122	214	14	17	3,105	91
	March	1,584	976	87	14	2	2,658	88
	April	1,595	775	102	13	40	2,444	85
	May	1,509	812	-78	12	20	2,235	88
	June	1,575	749	-4	14	14	2,321	88
	July	1,480	787	71	13	60	2,291	86
	August	1,444	875	-43	13	2	2,286	87
	September	1,495	906	-31	10	21	2,359	88
	October	1,512	875	-100	9	70	2,227	91
	November	1,579	1,024	-74	10	88	2,451	93
	December	1,660	1,025	46	10	62	2,679	92
	AVERAGE	1,580	939	10	12	33	2,508	
1981	January	1,612	1,015	302	32	65	2,896	82
	February	1,565	954	150	44	125	2,588	78
	March	1,424	699	100	48	145	2,126	75
	April	1,320	584	66	49	151	1,868	73
	May	1,223	741	-170	49	25	1,817	78
	June	1,232	540	291	49	76	2,037	69
	July	1,174	830	2	48	82	1,971	69
	August	1,231	819	-179	50	69	1,852	75
	September	1,292	841	-176	51	126	1,882	80
	October	1,238	786	8	54	202	1,884	80
	November	1,227	880	-49	53	203	1,909	81
	December	1,329	916	110	52	157	2,250	78
	AVERAGE	1,321	800	37	48	118	2,088	
1982	January	1,183	821	328	53	235	2,150	68
	February	1,136	928	358	53	213	2,261	58
	March	1,121	910	26	53	197	1,912	57
	April*	R 1,162	R 762	R 124	52	234	R 1,867	R 54
	May**	1,091	665	-106	NA	NA	1,469	57
	AVERAGE	1,138	815	142	NA	NA	1926	

<sup>1</sup> Ending Stocks for 1973-1979 are totals as of December 31.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease. Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 5.4.

\*\* Preliminary Statistics. See Explanatory Note 2.7.

Note: Beginning in January 1981, the Energy Information Administration modified survey forms, definitions, and processing procedures. See Explanatory Note 4 on Changes for the effects on Distillate Fuel Oil statistics.

Beginning in January 1975, the Bureau of Mines, Dept. of the Interior, expanded its stocks coverage to include an additional 100 bulk terminal operators.

Geographic coverage: The 50 United States and the District of Columbia including adjacent areas of the outer continental shelf excluding the Hawaiian Foreign Trade Zone.

Sources: See "Sources" at the end of this section.

# Liquefied Petroleum Gases and Ethane Supply and Disposition

		Supply			Disposition			Ending Stocks <sup>1</sup>
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Refinery Inputs	Exports	Product Supplied	
		Thousand Barrels per Day						Millions of Barrels
1973	AVERAGE	1,600	132	-35	220	27	1,449	99
1974	AVERAGE	1,565	123	-38	220	25	1,406	113
1975	AVERAGE	1,527	112	-35	246	26	1,333	125
1976	AVERAGE	1,535	130	24	260	25	1,404	116
1977	AVERAGE	1,566	161	-55	233	18	1,422	136
1978	AVERAGE	1,537	123	12	239	20	1,413	132
1979	AVERAGE	1,556	217	70	236	15	1,592	111
1980	January	1,560	264	461	291	30	1,963	96
	February	1,581	252	209	252	26	1,764	90
	March	1,519	214	7	211	23	1,506	90
	April	1,546	186	-339	171	19	1,203	100
	May	1,538	181	-224	182	17	1,295	107
	June	1,528	184	-319	170	18	1,205	117
	July	1,485	172	-283	209	18	1,147	126
	August	1,507	158	-296	203	17	1,149	135
	September	1,495	213	-80	228	19	1,382	137
	October	1,546	249	86	259	24	1,597	134
	November	1,549	231	82	304	23	1,535	132
	December	1,567	289	373	319	23	1,888	120
	AVERAGE	1,535	216	-27	233	21	1,469	
1981	January	1,617	306	363	352	21	1,913	117
	February	1,593	327	173	303	21	1,769	112
	March	1,551	260	-4	257	20	1,530	112
	April	1,586	214	-236	231	26	1,308	119
	May	1,587	189	-258	220	19	1,279	127
	June	1,567	206	-208	237	24	1,304	133
	July	1,507	213	-258	215	17	1,229	141
	August	1,592	195	-242	235	149	1,160	149
	September	1,622	199	-75	287	21	1,438	151
	October	1,593	287	72	320	76	1,556	149
	November	1,571	280	86	383	58	1,495	146
	December	1,468	255	379	428	50	1,624	135
	AVERAGE	1,571	244	-18	289	42	1,466	
1982	January	1,546	314	480	398	67	1,873	122
	February	1,476	291	310	327	51	1,699	114
	March	1,523	223	145	289	74	1,528	109
	April*	1,566	188	107	257	77	1,527	106
AVERAGE		1,529	253	261	318	68	1,657	

<sup>1</sup> Ending stocks for 1973 - 1979 are totals as of December 31.

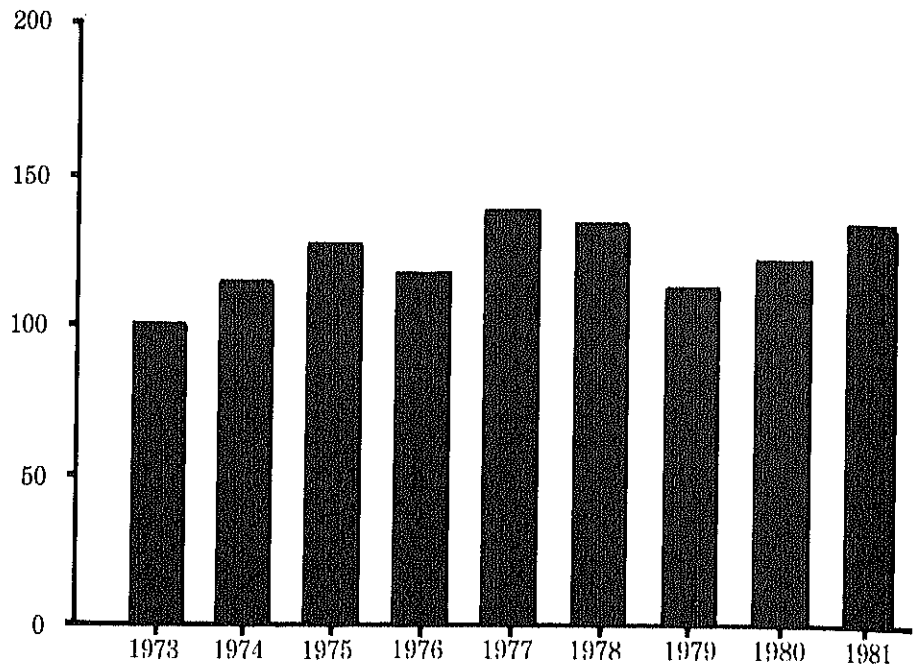
<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease. Totals may not equal sum of components due to independent rounding.

\* See Explanatory Note 5.5.

Geographic coverage: The 50 United States and the District of Columbia including adjacent areas of the outer continental shelf excluding the Hawaiian Foreign Trade Zone.

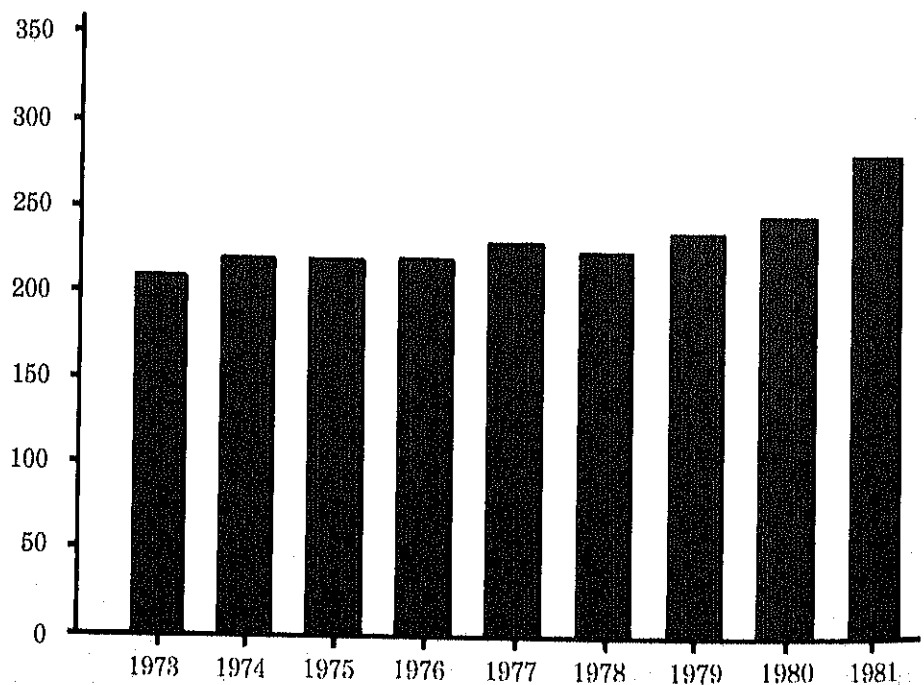
Sources: See "Sources" at the end of this section.

**Liquefied Petroleum Gases and Ethane Ending Stocks, Annual**  
(Millions of Barrels)



Source table: "Liquefied Petroleum Gases and Ethane Supply and Disposition."

**Other Petroleum Products<sup>1</sup> Ending Stocks, Annual**  
(Millions of Barrels)



<sup>1</sup>Includes natural gasoline and isopentane, unfinished oils, gasoline blending components, jet fuels, kerosene, lubricants, and asphalt. Some gasoline blending components not included prior to 1981.

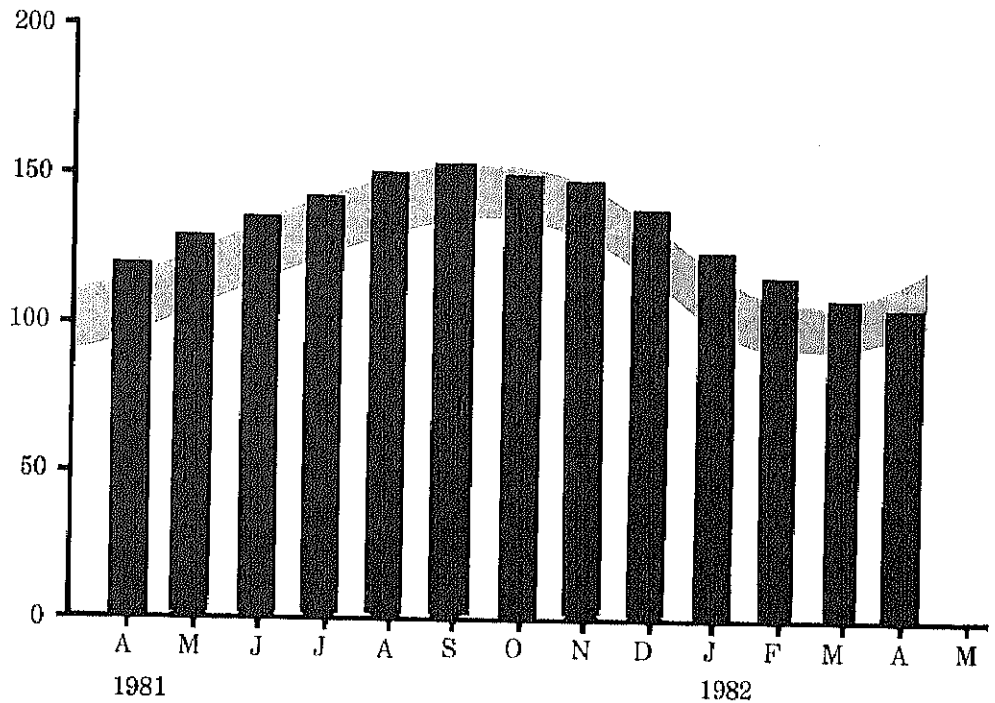
Source table: "Other Petroleum Products Supply and Disposition."

## Liquefied Petroleum Gases and Ethane Ending Stocks, Monthly (Millions of Barrels)

Range Stock Range<sup>1</sup>

Stock range based on 3 years of  
Explanatory Note 2.5.

File: "Liquefied Petroleum  
Ethane Supply and  
Disposition."



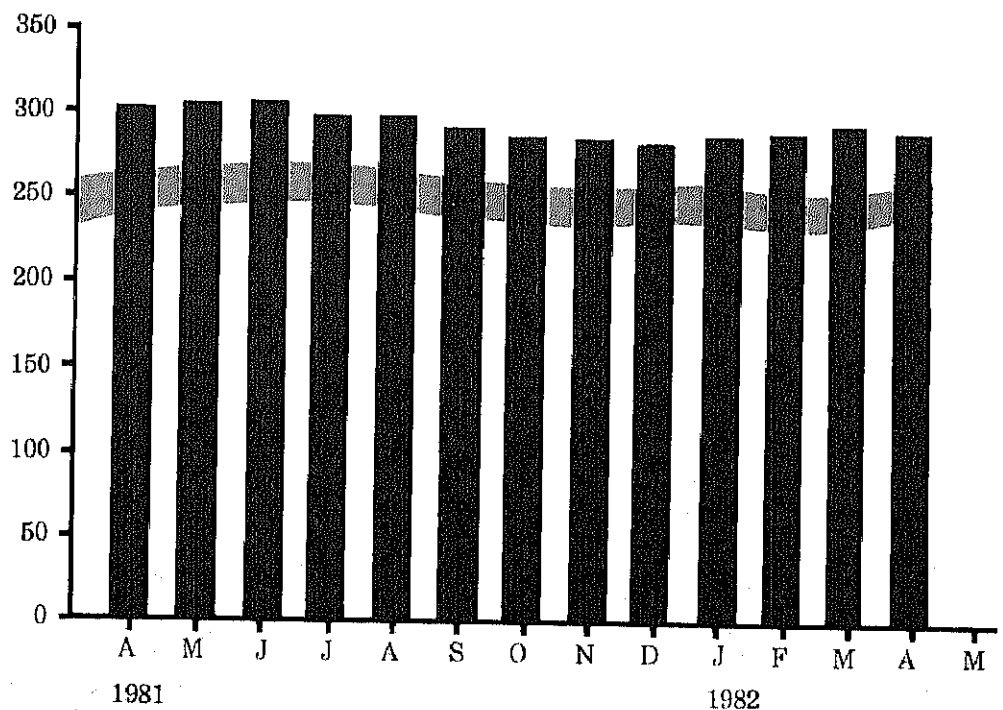
## Other Petroleum Products<sup>1</sup> Endings Stocks, Monthly (Millions of Barrels)

Range Stock Range<sup>2</sup>

Crude oil, natural gasoline and  
refined gasoline, unfinished oils, gasoline  
components, jet fuels, kerosene,  
and asphalt.

Stock range based on 3 years of  
Explanatory Note 2.5.

File: "Other Petroleum  
Supply and Disposition."



# Other Petroleum Products<sup>1</sup> Supply and Disposition

		Supply			Disposition			Ending Stocks <sup>2</sup>
		Total Production	Imports	Stock Withdrawal <sup>3</sup>	Refinery Inputs	Exports	Products Supplied	
		Thousand Barrels per Day						Millions of Barrels
1973	AVERAGE	3,693	502	-9	750	166	3,270	208
1974	AVERAGE	3,558	432	-28	665	174	3,123	218
1975	AVERAGE	3,424	277	-2	537	160	3,002	219
1976	AVERAGE	3,643	206	-5	524	175	3,145	220
1977	AVERAGE	3,912	205	-27	514	165	3,410	230
1978	AVERAGE	4,046	166	14	492	167	3,568	225
1979	AVERAGE	4,153	195	-37	352	209	3,749	238
1980	January	4,157	269	135	591	186	3,785	234
	February	4,181	167	-153	380	174	3,641	239
	March	4,128	219	-370	149	200	3,627	250
	April	4,105	238	-374	86	180	3,703	261
	May	4,018	222	-301	135	227	3,577	271
	June	4,016	226	-49	250	256	3,687	272
	July	3,873	188	82	356	209	3,578	270
	August	3,753	138	212	351	221	3,532	263
	September	3,952	206	25	234	188	3,761	262
	October	3,737	220	175	351	193	3,588	257
	November	3,786	213	156	475	148	3,533	252
	December	3,792	209	151	362	194	3,596	247
	AVERAGE	3,956	210	-23	311	198	3,634	
1981	January	3,821	162	80	851	132	3,081	296
	February	3,723	182	-200	538	208	2,958	302
	March	3,722	230	-55	642	210	3,043	304
	April	3,711	230	24	733	192	3,040	303
	May	3,892	229	-58	594	238	3,231	305
	June	3,925	218	-29	656	197	3,261	306
	July	3,852	149	284	791	212	3,282	297
	August	3,876	276	-33	676	219	3,225	298
	September	3,718	285	215	883	176	3,159	291
	October	3,503	241	193	710	227	3,000	285
	November	3,579	262	33	784	154	2,935	284
	December	3,543	243	71	805	223	2,829	282
	AVERAGE	3,739	226	46	723	199	3,088	
1982	January	3,181	240	-102	602	180	2,536	284
	February	3,364	260	-116	646	138	2,724	287
	March	3,485	241	-204	734	161	2,627	294
	April*	3,394	287	91	801	204	2,767	291
	AVERAGE	3,355	257	-83	696	171	2661	

<sup>1</sup> Includes natural gasoline and isopentane, unfractionated stream, plant condensate, other liquids; and all finished petroleum products except finished motor gasoline, distillate fuel oil, and residual fuel oil.

<sup>2</sup> Ending Stocks for 1973-1979 are totals as of December 31.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease. Totals may not equal sum of components due to independent rounding.

\* See Explanatory Note 5.6.

Note: Beginning in January 1975, the Bureau of mines, Dept. of the Interior, expanded its stocks coverage to include an additional 100 bulk terminal operators.

Geographic Coverage: The 50 United States and the District of Columbia including adjacent areas of the outer continental shelf, excluding the Hawaiian Foreign Trade Zone.

Sources: See "Sources" at the end of this section.

# Crude Oil and Petroleum Product Imports from OPEC Sources

	Algeria	Libya	Saudi Arabia	United Arab Emirates	Indonesia	Iran	Nigeria	Venezuela	Other OPEC <sup>1</sup>	Total OPEC	Total Arab OPEC <sup>2</sup>
Thousand Barrels per Day											
<b>1973</b>											
AVERAGE	136	164	486	71	213	223	459	1,135	106	2,993	915
<b>1974</b>											
AVERAGE	190	4	461	74	300	469	713	979	88	3,280	752
<b>1975</b>											
AVERAGE	282	232	715	117	390	280	762	702	122	3,601	1,383
<b>1976</b>											
AVERAGE	432	453	1,230	254	539	298	1,025	700	134	5,066	2,424
<b>1977</b>											
AVERAGE	559	723	1,380	335	541	535	1,143	690	287	6,193	3,185
<b>1978</b>											
AVERAGE	649	654	1,144	385	573	555	919	645	226	5,751	2,963
<b>1979</b>											
AVERAGE	636	658	1,356	281	420	304	1,080	690	212	5,637	3,056
<b>1980</b>											
January	503	618	1,576	202	454	95	1,054	786	179	5,467	3,034
February	656	603	1,412	304	317	9	1,036	543	152	5,031	3,058
March	472	654	1,380	289	405	0	924	352	175	4,652	2,889
April	546	683	1,300	150	374	0	734	343	240	4,369	2,862
May	441	468	1,149	172	360	0	955	405	147	4,098	2,329
June	497	561	1,328	178	331	0	998	409	106	4,408	2,598
July	557	492	1,192	158	365	0	752	417	62	3,995	2,418
August	432	431	1,139	142	289	0	792	406	112	3,743	2,222
September	375	505	1,112	107	299	0	735	425	111	3,670	2,185
October	465	478	1,044	182	348	0	728	482	95	3,821	2,226
November	493	500	1,201	105	348	0	624	595	78	3,944	2,338
December	423	658	1,301	83	288	0	958	610	101	4,423	2,484
<b>AVERAGE</b>	<b>488</b>	<b>554</b>	<b>1,261</b>	<b>172</b>	<b>348</b>	<b>9</b>	<b>857</b>	<b>481</b>	<b>130</b>	<b>4,300</b>	<b>2,551</b>
<b>1981</b>											
January	341	500	1,284	93	424	0	908	549	27	4,127	2,219
February	381	468	1,122	93	406	0	866	463	92	3,891	2,064
March	352	485	1,027	47	328	0	771	360	54	3,425	1,912
April	263	485	1,034	68	307	0	812	237	39	3,245	1,867
May	393	443	933	17	297	0	664	331	124	3,203	1,796
June	356	380	865	60	367	0	528	248	118	2,922	1,703
July	333	251	1,073	80	340	0	651	466	38	3,233	1,757
August	348	274	1,082	61	377	0	321	523	84	3,070	1,765
September	336	154	1,477	96	371	0	323	359	149	3,264	2,063
October	242	147	1,342	90	427	0	412	389	172	3,220	1,820
November	210	132	1,270	112	353	0	517	535	56	3,184	1,724
December	176	122	1,045	158	400	0	684	411	132	3,129	1,502
<b>AVERAGE</b>	<b>311</b>	<b>319</b>	<b>1,129</b>	<b>81</b>	<b>366</b>	<b>0</b>	<b>620</b>	<b>406</b>	<b>90</b>	<b>3,323</b>	<b>1,848</b>
<b>1982</b>											
January	254	161	877	87	273	0	662	376	128	2,818	1,378
February	139	92	692	79	236	0	579	347	102	2,267	1,044
March	91	37	555	155	200	0	503	399	91	2,032	860
April	85	0	479	122	215	0	427	411	79	1,818	707
<b>AVERAGE</b>	<b>143</b>	<b>73</b>	<b>651</b>	<b>112</b>	<b>231</b>	<b>0</b>	<b>543</b>	<b>384</b>	<b>100</b>	<b>2,236</b>	<b>999</b>

<sup>1</sup> Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.

<sup>2</sup> Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraq, Kuwait, and Qatar.

Totals may not equal sum of components due to independent rounding.

Note: Beginning in October 1977, Strategic Petroleum Reserve imports are included.

Geographic coverage: The 50 United States and the District of Columbia, including adjacent areas of the outer continental shelf, excluding the Hawaiian Foreign Trade Zone.

Sources: See "Sources" at the end of this section.



# Crude Oil and Petroleum Product Imports from Non-OPEC Sources

	Bahamas	Canada	Mexico	Netherlands Antilles	Trinidad and Tobago	United Kingdom	Puerto Rico <sup>1</sup>	Virgin Islands <sup>1</sup>	Other <sup>2</sup>	Total
	Thousand Barrels per Day									
<b>1973</b>										
<b>AVERAGE</b>	174	1,325	16	585	255	15	99	329	465	3,263
<b>1974</b>										
<b>AVERAGE</b>	164	1,070	8	511	251	8	90	391	340	2,832
<b>1975</b>										
<b>AVERAGE</b>	152	846	71	332	242	14	90	406	300	2,454
<b>1976</b>										
<b>AVERAGE</b>	118	599	87	275	274	31	88	422	353	2,247
<b>1977</b>										
<b>AVERAGE</b>	171	517	179	211	289	126	105	466	550	2,614
<b>1978</b>										
<b>AVERAGE</b>	160	467	318	229	253	180	94	429	484	2,613
<b>1979</b>										
<b>AVERAGE</b>	147	538	439	231	190	202	92	431	548	2,819
<b>1980</b>										
January	175	570	545	289	239	296	57	467	492	3,131
February	111	540	477	205	192	105	95	536	652	2,914
March	124	460	460	184	189	232	101	449	601	2,800
April	56	459	546	231	143	182	76	425	619	2,737
May	77	419	576	176	221	124	88	303	496	2,481
June	77	409	627	197	162	146	91	314	465	2,486
July	43	378	460	242	180	115	90	378	376	2,262
August	62	319	646	255	159	196	85	264	463	2,449
September	58	458	550	213	205	218	52	343	473	2,569
October	70	475	605	230	114	134	107	372	450	2,557
November	22	470	459	264	158	157	108	391	435	2,464
December	54	502	445	212	149	199	109	423	378	2,471
<b>AVERAGE</b>	78	455	533	225	176	176	88	388	491	2,609
<b>1981</b>										
January	39	543	401	198	150	233	89	494	552	2,701
February	84	546	437	227	163	271	46	481	626	2,881
March	74	472	488	227	93	263	45	370	571	2,603
April	68	412	418	198	139	402	40	365	380	2,423
May	122	365	522	213	105	368	58	344	474	2,573
June	51	353	538	196	124	397	67	262	525	2,513
July	77	382	384	212	178	553	50	206	541	2,583
August	69	378	489	255	123	592	68	184	539	2,698
September	111	423	708	163	169	528	72	265	661	3,100
October	63	449	669	161	121	351	60	303	562	2,739
November	63	547	628	168	108	253	76	294	421	2,557
December	70	501	587	148	125	280	73	367	563	2,714
<b>AVERAGE</b>	74	447	522	197	133	375	62	327	534	2,672
<b>1982</b>										
January	28	509	426	179	106	346	62	334	425	2,415
February	50	533	489	221	120	132	38	354	487	2,424
March	43	435	503	189	118	293	62	307	479	2,429
April	67	357	467	180	166	247	36	266	682	2,468
<b>AVERAGE</b>	47	457	471	192	127	257	50	315	518	2,434

<sup>1</sup> U.S. Possessions.

<sup>2</sup> Includes all Non-OPEC countries except those shown above.

Totals may not equal sum of components due to independent rounding.

Note: Beginning in October 1977, Strategic Petroleum Reserve Imports are included.

Geographic coverage: The 50 United States and the District of Columbia, including adjacent areas of the outer continental shelf, excluding the Hawaiian Foreign Trade Zone.

Sources: See "Sources" at the end of this section.

## Sources

- 1973 through 1976: Bureau of Mines, U.S. Department of the Interior, "Petroleum Statement, Annual" and PAD Districts Supply/Demand, Annual," Mineral Industry Surveys.
- 1977 through 1980: Energy Information Administration, U.S. Department of Energy, "Monthly Petroleum Statistics Report," (unleaded gasoline category).
- 1977 through 1980: Energy Information Administration, U.S. Department of Energy, "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual," "Energy Data Reports.
- January 1981 through December 1981: Energy Information Administration, U.S. Department of Energy, "Petroleum Supply Annual"
- January 1982 through April 1982: Detailed statistics in this issue. (See Explanatory Notes 5.1 through 5.6).
- May 1982: Estimates based on EIA weekly data (except domestic crude oil production). See Explanatory Note 2.2).
- January 1982 through May 1982: Domestic crude oil production estimate based on historical statistics from State Conservation Agencies and the U. S. Geological Survey. (See Explanatory Note 2.7).



## Detailed Statistics

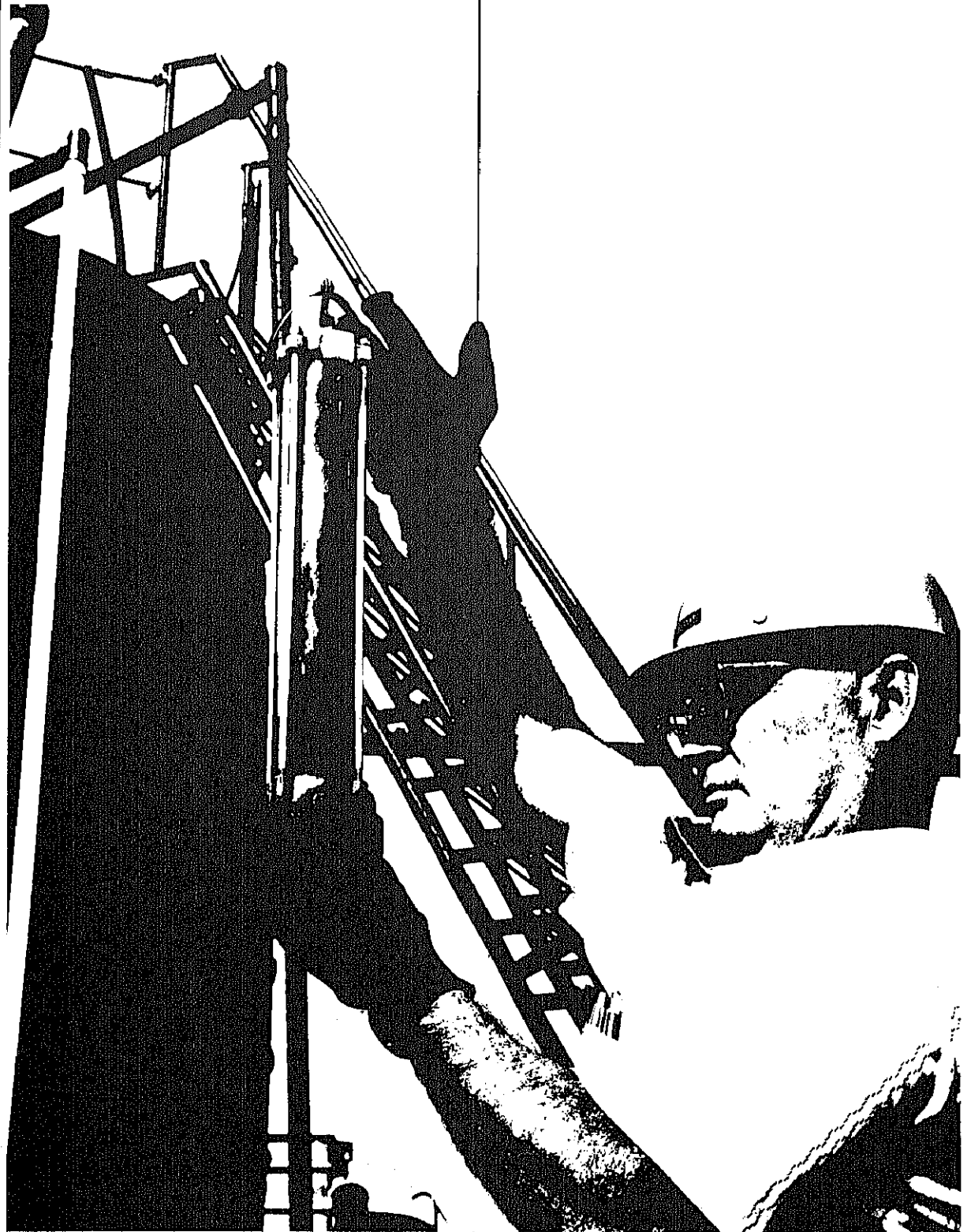




Table 1. U.S. Petroleum Balance, April 1982

	Current Month		Year-to-Date	
	Thousand Barrels	Thousand Barrels per Day	Thousand Barrels	Thousand Barrels per Day
Crude Oil (Including Lease Condensate)				
Field Production				
(1) Alaska .....	E 50,595	1,687	E 204,445	1,704
(2) Lower 48 States .....	E 208,971	6,966	E 833,683	6,947
(3) Total U.S. ....	E 259,566	8,652	E 1,038,128	8,651
Net Imports				
(4) Imports (Gross Excluding SPR) .....	78,683	2,623	347,402	2,895
(5) SPR Imports .....	5,694	190	21,167	176
(6) Exports .....	5,234	174	31,088	259
(7) Imports (Net Including SPR) .....	79,143	2,638	337,481	2,812
Other Sources				
(8) SPR Withdrawal (+) or Addition (-) .....	-6,997	-233	-25,193	-210
(9) Other Stock Withdrawal (+) or Addition (-) .....	10,215	341	7,990	67
(10) Used Directly and Losses .....	-2,026	-68	-8,021	-67
(11) Unaccounted for 1 .....	1,670	56	16,602	138
(12) Total Other Sources .....	2,862	95	-8,622	-72
(13) Crude Input to Refineries .....	341,571	11,386	1,366,987	11,392
(13) = (3) + (7) + (12)				
Natural Gas Plant Liquids (NGPL)				
(14) Field Production .....	47,643	1,588	186,975	1,558
(15) Imports 2 .....	172	6	961	8
(16) Stock Withdrawal (+) or Addition (-) 2 .....	2,319	77	70	1
(17) Total NGPL Supply .....	50,134	1,671	188,006	1,567
Other Liquids				
Unfinished Oils and Gasoline Blending Components, Total				
(18) Stock Withdrawal (+) or Addition (-) .....	2,799	93	-1,187	-10
(19) Imports .....	3,633	121	17,666	147
(20) Other Hydrocarbons and Alcohol New Supply (Field Production) .....	1,660	55	5,633	47
(21) Refinery Processing Gain 1 .....	14,886	496	60,796	507
(22) Crude Used Directly .....	1,953	65	7,635	64
(23) Total Other Liquids .....	24,931	831	80,543	755
(23) = (18) through (22)				
(24) Total Production of Products 3 .....	416,637	13,888	1,645,535	13,713
(24) = (13) + (17) + (23)				
Net Imports of Refined Products 3				
(25) Imports (Gross) .....	40,407	1,347	173,243	1,444
(26) Exports .....	18,331	611	68,020	567
(27) Imports (Net) .....	22,076	736	105,223	877
(28) Total New Supply of Products .....	438,713	14,624	1,750,758	14,590
(28) = (24) + (27)				
(29) Refined Products Stock Withdrawal (+) or Addition (-) 3 .....	42,713	1,424	152,115	1,268
(30) Total Petroleum Products Supplied for Domestic Use .....	481,426	16,048	1,902,873	15,857
(30) = (28) + (29)				
(31) Finished Motor Gasoline .....	206,705	6,890	766,573	6,380
(32) Naphtha-Type Jet Fuel .....	6,634	221	24,079	201
(33) Kerosene-Type Jet Fuel .....	23,411	780	97,731	814
(34) Kerosene .....	3,360	112	18,348	153
(35) Distillate Fuel Oil .....	89,891	2,996	375,526	3,129
(36) Residual Fuel Oil .....	56,006	1,867	244,871	2,041
(37) Liquefied Petroleum Gases and Ethane .....	45,811	1,527	196,423	1,637
(38) Other .....	58,610	1,960	217,136	1,809
(39) Total Reclassified 1 .....	-9,199	-307	-36,812	-307
(40) Total Product Supplied .....	481,426	16,048	1,902,875	15,857
(40) = (31) through (39)				
Ending Stocks, All Oils				
(41) Crude Oil and Lease Condensate (Excluding SPR) .....	355,474	--	--	--
(42) Strategic Petroleum Reserve (SPR) .....	255,534	--	--	--
(43) Unfinished Oils .....	118,949	--	--	--
(44) Gasoline Blending Components .....	44,017	--	--	--
(45) Natural Gasoline and Unfractionated Stream .....	15,449	--	--	--
(46) Finished Refined Products 3 .....	560,430	--	--	--
(47) Total Stocks .....	1,349,853	--	--	--

1 A balancing item.

2 Includes isopentane, natural gasoline, unfractionated stream, and plant condensate only.

3 For products included see Explanatory Note 5.7.

E = Estimated.

-- Not Applicable.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes 1, 2, and 5.7.

Table 2. Supply and Disposition of Crude Oil and Petroleum Products, April 1982  
(Thousands of Barrels)

Commodity	Supply					Disposition			Ending Stocks	
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Used Directly and Losses <sup>2</sup>	Refinery Inputs	Exports		Products Supplied
Crude Oil (including lease condensate) .....	E 259,566	0	84,377	3,218	1,670	-2,026	341,571	5,234	0	611,008
Natural Gas Plant Liquids and LRGs .....	47,208	7,827	5,803	5,527	0	0	14,431	2,298	49,636	121,237
Natural Gasoline and Isopentane .....	7,861	0	0	1,390	0	0	5,482	0	3,770	10,058
Unfractionated Stream .....	-885	0	0	904	0	0	0	0	19	3,884
Plant Condensate .....	1,089	0	172	25	0	0	1,249	0	37	1,507
Liquefied Petroleum Gases and Ethane .....	39,143	7,827	5,631	3,208	0	0	7,700	2,298	45,811	105,788
Ethane .....	9,039	213	1,207	-97	0	0	178	(s)	10,177	5,769
Propane .....	13,899	7,019	968	1,728	0	0	92	1,264	22,257	58,605
Butane .....	6,522	429	1,361	211	0	0	3,555	1,034	3,934	17,096
Butane-Propane Mixtures .....	121	175	1,125	8	0	0	109	0	1,320	981
Ethane-Propane Mixtures .....	6,434	0	971	723	0	0	0	0	8,128	16,262
Isobutane .....	3,136	-9	0	634	0	0	3,766	0	-5	7,075
Other Liquids .....	1,660	0	3,633	2,799	0	0	17,291	0	-9,199	152,966
Other Hydrocarbons and Alcohol .....	1,660	0	0	-31	0	0	1,629	0	214	0
Unfinished Oils .....	0	0	2,731	-3,116	0	0	5,329	0	-5,714	118,949
Motor Gasoline Blending Components .....	0	0	902	5,827	0	0	10,298	0	-3,569	43,264
Aviation Gasoline Blending Components .....	0	0	0	119	0	0	35	0	84	539
Finished Petroleum Products .....	436	380,352	34,776	39,506	0	1,953	0	16,032	440,991	454,641
Finished Motor Gasoline .....	55	183,072	5,323	19,244	0	0	0	990	206,705	179,574
Finished Leaded Motor Gasoline .....	54	87,720	3,604	11,502	0	0	0	990	101,890	90,640
Finished Unleaded Motor Gasoline .....	2	95,252	1,719	7,758	0	0	0	0	104,731	88,864
Gasohol .....	0	100	0	-16	0	0	0	0	84	70
Finished Aviation Gasoline .....	50	494	0	220	0	0	0	0	763	2,422
Naphtha-Type Jet Fuel .....	0	6,388	182	87	0	0	0	22	6,634	6,358
Kerosene-Type Jet Fuel .....	2	23,917	1,242	-1,706	0	0	0	44	23,411	37,787
Kerosene .....	3	3,616	590	-829	0	0	0	20	3,360	9,592
Distillate Fuel Oil .....	2	70,714	1,779	18,928	0	386	0	1,919	89,891	108,803
Residual Fuel Oil .....	0	34,862	22,863	3,725	0	1,567	0	7,012	56,006	53,624
Naphtha < 400 Deg. for Petro. Feed. Use .....	0	4,370	1,639	415	0	0	0	210	6,215	2,734
Other Oils > 400 Deg. for Petro. Feed. Use .....	0	7,875	0	193	0	0	0	442	7,626	1,457
Special Naphthas .....	96	1,439	836	189	0	0	0	433	2,128	3,569
Lubricants .....	0	4,526	187	352	0	0	0	513	4,552	13,353
Waxes .....	0	412	7	1	0	0	0	14	406	664
Petroleum Coke .....	0	12,142	0	-99	0	0	0	4,382	7,661	4,793
Asphalt .....	0	8,031	118	-1,002	0	0	0	4	7,143	27,087
Road Oil .....	0	196	1	-16	0	0	0	0	181	54
Still Gas .....	0	15,998	0	0	0	0	0	0	15,998	0
Miscellaneous Products .....	228	2,300	8	-197	0	0	0	27	2,312	2,770
Total .....	308,871	388,179	128,589	51,050	1,670	-73	373,293	23,565	481,428	1,349,853

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Total equals refinery fuel use and loss.

(s) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 3. Year-to-Date Supply and Disposition Statistics of Crude Oil and Petroleum Products, January - April 1982  
(Thousands of Barrels)

Commodity	Supply					Disposition			Ending Stocks	
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Used Directly and Losses <sup>2</sup>	Refinery Inputs	Exports		Products Supplied
Crude Oil (including lease condensate)	E 1,038,128	0	368,569	-17,203	16,602	-8,021	1,366,987	31,088	0	611,008
Natural Gas Plant Liquids and LRGs	184,831	29,969	31,361	28,933	0	0	62,765	8,117	204,212	121,237
Natural Gasoline and Isopentane	27,771	0	313	-666	0	0	19,845	0	7,574	10,056
Unfractionated Stream	-489	0	0	668	0	0	8	0	171	3,884
Plant Condensate	4,078	0	648	67	0	0	4,749	0	44	1,507
Liquefied Petroleum Gases and Ethane	153,471	29,969	30,401	28,863	0	0	38,163	8,117	196,423	105,788
Ethane	33,570	775	6,884	-855	0	0	873	(9)	39,501	5,769
Propane	56,557	28,318	7,946	16,953	0	0	446	3,731	105,597	58,605
Butane	25,868	573	6,795	10,158	0	0	22,032	4,385	16,967	17,096
Butane-Propane Mixtures	421	298	3,013	772	0	0	574	0	3,930	981
Ethane-Propane Mixtures	24,362	0	5,763	172	0	0	0	0	30,297	16,262
Isobutane	12,702	5	0	1,663	0	0	14,238	0	132	7,075
Other Liquids	5,633	0	17,666	-1,187	0	0	58,924	0	-36,812	162,966
Other Hydrocarbons and Alcohol	5,633	0	0	-6	0	0	5,627	0	0	214
Unfinished Oils	0	0	13,915	-7,601	0	0	24,612	0	-18,298	118,949
Motor Gasoline Blending Components	0	0	3,751	6,268	0	0	28,789	0	-18,770	43,264
Aviation Gasoline Blending Components	0	0	0	152	0	0	-104	0	256	539
Finished Petroleum Products	2,146	1,519,503	142,842	123,253	0	7,635	0	59,903	1,735,476	454,641
Finished Motor Gasoline	285	726,258	18,276	23,895	0	0	0	3,140	765,573	179,574
Finished Leaded Motor Gasoline	267	347,401	10,921	17,444	0	0	0	3,140	372,893	90,640
Finished Unleaded Motor Gasoline	18	376,429	7,355	6,461	0	0	0	0	392,263	88,864
Gasohol	0	428	0	-11	0	0	0	0	417	70
Finished Aviation Gasoline	179	2,276	0	311	0	0	0	0	2,767	2,422
Naphtha-Type Jet Fuel	0	23,123	283	696	0	0	0	23	24,079	6,358
Kerosene-Type Jet Fuel	2	97,721	4,408	-3,776	0	0	0	624	97,731	37,787
Kerosene	16	15,587	1,567	1,450	0	0	0	272	18,348	9,592
Distillate Fuel Oil	11	291,402	9,890	82,737	0	1,315	0	9,829	375,526	108,803
Residual Fuel Oil	0	138,087	102,478	24,368	0	6,320	0	26,383	244,871	53,624
Naphtha < 400 Deg. for Petro. Feed	0	19,957	2,099	-265	0	0	0	552	21,239	2,734
Other Oils > 400 Deg. for Petrochem. Feedstock	0	32,466	0	293	0	0	0	2,055	30,704	1,457
Special Naphthas	301	5,854	2,801	395	0	0	0	1,018	8,334	3,569
Lubricants	0	17,137	768	951	0	0	0	1,935	16,921	13,353
Waxes	0	1,698	60	6	0	0	0	87	1,677	664
Petroleum Coke	0	48,035	0	-291	0	0	0	13,800	33,944	4,793
Asphalt	0	26,994	178	-7,500	0	0	0	30	19,642	27,087
Road Oil	0	239	1	-28	0	0	0	0	212	54
Still Gas	0	63,034	0	0	0	0	0	0	63,034	0
Miscellaneous Products	1,352	9,635	33	9	0	0	0	155	10,874	2,770
Total	1,230,738	1,549,472	560,438	133,795	16,602	-386	1,488,676	99,108	1,902,875	1,349,853

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Total equals refinery fuel use and loss.

(s) Less than 500 barrels or less than 500 barrels per day.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.



Table 4. Daily Average Supply and Disposition of Crude Oil and Petroleum Products, April 1982  
(Thousand Barrels per Day)

Commodity	Supply					Disposition			
	Field Production	Refinery Production	Imports	Stock Withdrawal(+) Addition(-)	Unaccounted For Crude Oil	Crude Used Directly and Losses <sup>2</sup>	Refinery Inputs	Exports	Products Supplied
<b>Crude Oil (including lease condensate)</b> .....	<b>E 8,652</b>	<b>0</b>	<b>2,813</b>	<b>107</b>	<b>56</b>	<b>-68</b>	<b>11,386</b>	<b>174</b>	<b>0</b>
<b>Natural Gas Plant Liquids and LRGs</b> .....	<b>1,574</b>	<b>261</b>	<b>193</b>	<b>184</b>	<b>0</b>	<b>0</b>	<b>481</b>	<b>77</b>	<b>1,655</b>
Natural Gasoline and Isopentane .....	262	0	0	46	0	0	183	0	126
Unfractionated Stream .....	-30	0	0	30	0	0	0	0	1
Plant Condensate .....	36	0	6	1	0	0	42	0	1
Liquefied Petroleum Gases and Ethane .....	1,305	261	188	107	0	0	257	77	1,527
Ethane .....	301	7	40	-3	0	0	6	(s)	339
Propane .....	463	234	32	58	0	0	3	42	742
Butane .....	217	14	45	7	0	0	118	34	131
Butane-Propane Mixtures .....	4	6	37	(s)	0	0	4	0	44
Ethane-Propane Mixtures .....	214	0	32	24	0	0	0	0	271
Isobutane .....	105	(s)	0	21	0	0	126	0	(s)
<b>Other Liquids</b> .....	<b>55</b>	<b>0</b>	<b>121</b>	<b>93</b>	<b>0</b>	<b>0</b>	<b>576</b>	<b>0</b>	<b>-307</b>
Other Hydrocarbons and Alcohol .....	55	0	0	-1	0	0	54	0	0
Unfinished Oils .....	0	0	91	-104	0	0	178	0	-190
Motor Gasoline Blending Components .....	0	0	30	194	0	0	343	0	-119
Aviation Gasoline Blending Components .....	0	0	0	4	0	0	1	0	3
<b>Finished Petroleum Products</b> .....	<b>15</b>	<b>12,678</b>	<b>1,159</b>	<b>1,317</b>	<b>0</b>	<b>65</b>	<b>0</b>	<b>534</b>	<b>14,700</b>
Finished Motor Gasoline .....	2	6,102	177	641	0	0	0	33	6,890
Finished Leaded Motor Gasoline .....	2	2,924	120	383	0	0	0	33	3,396
Finished Unleaded Motor Gasoline .....	(s)	3,175	57	259	0	0	0	0	3,491
Gasohol .....	0	3	0	-1	0	0	0	0	3
Finished Aviation Gasoline .....	2	16	0	7	0	0	0	0	25
Naphtha-Type Jet Fuel .....	0	213	6	3	0	0	0	1	221
Kerosene-Type Jet Fuel .....	(s)	797	41	-57	0	0	0	1	780
Kerosene .....	(s)	121	20	-28	0	0	0	1	112
Distillate Fuel Oil .....	(s)	2,357	59	631	0	13	0	64	2,996
Residual Fuel Oil .....	0	1,162	762	124	0	52	0	234	1,867
Naphtha < 400 Deg. for Petro. Feed. Use .....	0	146	55	14	0	0	0	7	207
Other Oils > 400 Deg. for Petro. Feed. Use .....	0	262	0	6	0	0	0	15	254
Special Naphthas .....	3	48	28	6	0	0	0	14	71
Lubricants .....	0	151	6	12	0	0	0	17	152
Waxes .....	0	14	(s)	(s)	0	0	0	(s)	14
Petroleum Coke .....	0	405	0	-3	0	0	0	146	255
Asphalt .....	0	268	4	-33	0	0	0	(s)	238
Road Oil .....	0	7	(s)	-1	0	0	0	0	6
Still Gas .....	0	533	0	0	0	0	0	0	533
Miscellaneous Products .....	8	77	(s)	-7	0	0	0	1	77
<b>Total</b> .....	<b>10,296</b>	<b>12,939</b>	<b>4,286</b>	<b>1,702</b>	<b>56</b>	<b>-2</b>	<b>12,443</b>	<b>786</b>	<b>16,048</b>

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Total equals refinery fuel use and loss.

(s) Less than 500 barrels per day.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 5. Year-to-Date Daily Average Supply and Disposition of Crude Oil and Petroleum Products, January - April 1982  
(Thousand Barrels per Day)

Commodity	Supply					Disposition			
	Field Production	Refinery Production	Imports	Stock Withdrawal(+) Addition(-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Used Directly and Losses <sup>2</sup>	Refinery Inputs	Exports	Products Supplied
Crude Oil (including lease condensate)	8,651	0	3,071	-143	138	-67	11,392	259	0
Natural Gas Plant Liquids and LRGs	1,540	250	261	241	0	0	523	68	1,702
Natural Gasoline and Isopentane	231	0	3	-6	0	0	165	0	63
Unfractionated Stream	-4	0	0	6	0	0	(s)	0	1
Plant Condensate	34	0	5	1	0	0	40	0	(s)
Liquefied Petroleum Gases and Ethane	1,279	250	253	241	0	0	318	68	1,637
Ethane	280	6	57	-7	0	0	7	(s)	329
Propane	471	236	66	141	0	0	4	31	880
Butane	215	5	57	85	0	0	184	37	141
Butane-Propane Mixtures	4	2	25	6	0	0	5	0	33
Ethane-Propane Mixtures	203	0	48	1	0	0	0	0	252
Isobutane	106	(s)	0	14	0	0	119	0	1
Other Liquids	47	0	147	-10	0	0	491	0	-307
Other Hydrocarbons and Alcohol	47	0	0	(s)	0	0	47	0	0
Unfinished Oils	0	0	116	-63	0	0	205	0	-152
Motor Gasoline Blending Components	0	0	31	52	0	0	240	0	-156
Aviation Gasoline Blending Components	0	0	0	1	0	0	-1	0	2
Finished Petroleum Products	18	12,663	1,190	1,027	0	64	0	499	14,462
Finished Motor Gasoline	2	6,052	152	199	0	0	0	26	6,380
Finished Leaded Motor Gasoline	2	2,895	91	145	0	0	0	26	3,107
Finished Unleaded Motor Gasoline	(s)	3,154	61	54	0	0	0	0	3,269
Gasohol	0	4	0	(s)	0	0	0	0	3
Finished Aviation Gasoline	1	19	0	3	0	0	0	0	23
Naphtha-Type Jet Fuel	0	193	2	6	0	0	0	(s)	201
Kerosene-Type Jet Fuel	(s)	814	37	-31	0	0	0	5	814
Kerosene	(s)	130	13	12	0	0	0	2	153
Distillate Fuel Oil	(s)	2,428	82	689	0	11	0	82	3,129
Residual Fuel Oil	0	1,151	854	203	0	53	0	220	2,041
Naphtha < 400 Deg. for Petro. Feed. Use	0	166	17	-2	0	0	0	5	177
Other Oils > 400 Deg. for Petro. Feed. Use	0	271	0	2	0	0	0	17	256
Special Naphthas	3	49	23	3	0	0	0	8	69
Lubricants	0	143	6	8	0	0	0	16	141
Waxes	0	14	(s)	(s)	0	0	0	1	14
Petroleum Coke	0	400	0	-2	0	0	0	115	283
Asphalt	0	225	1	-62	0	0	0	(s)	164
Road Oil	0	2	(s)	(s)	0	0	0	0	2
Still Gas	0	525	0	0	0	0	0	0	525
Miscellaneous Products	11	80	(s)	(s)	0	0	0	1	91
Total	10,256	12,912	4,670	1,115	138	-3	12,406	826	15,857

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Total equals refinery fuel use and loss.

(s) Less than 500 barrels per day.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 6. PAD District I, Supply and Disposition of Crude Oil and Petroleum Products, April 1982  
(Thousands of Barrels)

Commodity	Field Production	Refinery Production	Imports	Supply			Crude Used Directly and Losses <sup>2</sup>	Net Receipts	Disposition			Ending Stocks
				Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>				Refinery Inputs	Exports	Products Supplied	
<b>Crude Oil (including lease condensate)</b> .....	<b>E 2,751</b>	<b>0</b>	<b>26,536</b>	<b>1,041</b>	<b>1,547</b>		<b>-1</b>	<b>3,313</b>	<b>35,187</b>	<b>0</b>	<b>0</b>	<b>17,691</b>
<b>Natural Gas Plant Liquids and LRGs</b> .....	<b>1,147</b>	<b>1,344</b>	<b>345</b>	<b>28</b>	<b>0</b>		<b>0</b>	<b>1,807</b>	<b>286</b>	<b>62</b>	<b>4,324</b>	<b>2,571</b>
Liquefied Petroleum Gases .....	485	1,344	210	39	0		0	1,807	261	62	3,562	2,540
Ethane .....	362	0	0	0	0		0	0	0	(5)	362	0
Other Products <sup>3</sup> .....	300	0	135	-11	0		0	0	25	0	400	31
<b>Other Liquids</b> .....	<b>80</b>	<b>0</b>	<b>1,903</b>	<b>460</b>	<b>0</b>		<b>0</b>	<b>1,067</b>	<b>4,210</b>	<b>0</b>	<b>-700</b>	<b>20,895</b>
Other Hydrocarbons and Alcohol .....	80	0	0	-3	0		0	0	77	0	0	7
Unfinished Oils .....	0	0	1,150	-836	0		0	1,067	2,021	0	-640	16,101
Motor Gasoline Blending Components .....	0	0	754	1,298	0		0	0	2,112	0	-59	4,787
Aviation Gasoline Blending Components .....	0	0	0	0	0		0	0	0	0	0	0
<b>Finished Petroleum Products</b> .....	<b>51</b>	<b>39,788</b>	<b>27,780</b>	<b>14,426</b>	<b>0</b>		<b>0</b>	<b>70,931</b>	<b>0</b>	<b>780</b>	<b>152,195</b>	<b>142,725</b>
Finished Motor Gasoline .....	51	19,577	4,193	4,117	0		0	42,290	0	1	70,227	56,960
Finished Leaded Motor Gasoline .....	51	8,485	3,091	1,820	0		0	19,013	0	1	32,458	26,948
Finished Unleaded Motor Gasoline .....	0	11,092	1,102	2,295	0		0	23,277	0	0	37,766	29,996
Gasohol .....	0	0	0	2	0		0	0	0	0	2	16
Finished Aviation Gasoline .....	0	4	0	-21	0		0	264	0	0	247	465
Naphtha-Type Jet Fuel .....	0	747	182	-25	0		0	707	0	(5)	1,611	627
Kerosene-Type Jet Fuel .....	0	876	1,242	-556	0		0	7,627	0	0	9,189	9,601
Kerosene .....	0	181	500	8	0		0	413	0	(5)	1,102	3,868
Distillate Fuel Oil .....	0	7,670	1,487	9,826	0		0	13,905	0	1	32,887	35,104
Residual Fuel Oil .....	0	4,673	18,898	1,321	0		0	4,058	0	(5)	28,950	23,508
Naphtha and Other Oils for Petrochem. ....	0	0	0	0	0		0	0	0	0	0	0
Feedstock .....	0	407	707	109	0		0	-126	0	61	1,036	252
Special Naphthas .....	0	19	337	-29	0		0	312	0	4	636	1,068
Lubricants .....	0	627	116	39	0		0	819	0	176	1,425	3,900
Waxes .....	0	97	2	-9	0		0	5	0	5	90	151
Petroleum Coke .....	0	1,169	0	-78	0		0	0	0	517	574	1,077
Asphalt .....	0	1,809	114	-264	0		0	261	0	1	1,919	5,671
Road Oil .....	0	0	1	0	0		0	0	0	0	1	0
Still Gas .....	0	1,551	0	0	0		0	0	0	0	1,551	0
Miscellaneous Products .....	0	381	1	-12	0		0	396	0	16	751	473
<b>Total</b> .....	<b>4,029</b>	<b>41,132</b>	<b>56,564</b>	<b>15,955</b>	<b>1,547</b>		<b>-1</b>	<b>77,118</b>	<b>39,683</b>	<b>842</b>	<b>155,819</b>	<b>183,882</b>

1 Unaccounted for crude oil is a balancing item.

2 Total equals refinery fuel use and loss.

3 Includes natural gasoline, isopentane, unrefined stream, and plant condensate.

(5) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 7. PAD District II Supply and Disposition of Crude Oil and Petroleum Products, April 1982  
(Thousands of Barrels)

Commodity	Supply					Disposition				Ending Stocks	
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Used Directly and Losses <sup>2</sup>	Net Receipts	Refinery Inputs	Exports		Products Supplied
Crude Oil (including lease condensate)	E 29,583	0	9,803	1,740	38,554	-5	1,125	80,042	757	0	81,623
Natural Gas Plant Liquids and LRGs	8,689	1,787	3,530	255	0	0	4,103	4,382	765	13,218	32,986
Liquefied Petroleum Gases	7,275	1,765	2,323	80	0	0	3,053	2,927	765	10,805	27,570
Ethane	1,568	22	1,207	-118	0	0	0	0	0	2,680	1,886
Other Products <sup>3</sup>	-155	0	0	293	0	0	1,050	1,455	0	-267	3,530
Other Liquids	196	0	96	355	0	0	908	2,051	0	-496	32,454
Other Hydrocarbons and Alcohol	196	0	0	-23	0	0	0	173	0	0	115
Unfinished Oils	0	0	52	-1,184	0	0	55	-887	0	-190	22,454
Motor Gasoline Blending Components	0	0	44	1,548	0	0	853	2,751	0	-306	9,704
Aviation Gasoline Blending Components	0	0	0	14	0	0	0	14	0	0	181
Finished Petroleum Products	17	88,442	354	18,269	0	1	10,048	0	619	116,512	118,966
Finished Motor Gasoline	0	49,714	2	10,025	0	0	6,593	0	1	66,333	53,518
Finished Leaded Motor Gasoline	0	25,677	0	6,502	0	0	3,434	0	1	35,612	27,920
Finished Unleaded Motor Gasoline	0	23,995	2	3,531	0	0	3,159	0	0	30,687	25,569
Gasohol	0	42	0	-8	0	0	0	0	0	34	29
Finished Aviation Gasoline	0	58	0	92	0	0	53	0	0	203	556
Naphtha-Type Jet Fuel	0	988	0	-38	0	0	1	0	0	951	1,212
Kerosene-Type Jet Fuel	0	3,862	0	-549	0	0	1,308	0	0	4,621	8,118
Kerosene	0	592	0	-390	0	0	91	0	0	293	2,485
Distillate Fuel Oil	1	17,635	1	9,008	0	1	2,668	0	0	29,314	31,190
Residual Fuel Oil	0	3,313	250	760	0	0	-783	0	0	3,540	6,197
Naphtha and Other Oils for Petro. Feed	0	1,683	0	247	0	0	97	0	33	1,994	356
Special Naphthas	0	284	76	28	0	0	154	0	1	540	642
Lubricants	0	887	10	9	0	0	290	0	10	1,186	2,012
Waxes	0	35	4	3	0	0	0	0	1	42	75
Petroleum Coke	0	3,062	0	-79	0	0	0	0	572	2,411	1,014
Asphalt	0	2,493	5	-824	0	0	-273	0	1	1,400	11,384
Road Oil	0	14	0	-9	0	0	0	0	0	5	22
Still Gas	0	3,683	0	0	0	0	0	0	0	3,683	0
Miscellaneous Products	15	139	6	-13	0	0	-151	0	1	-5	184
Total	38,484	90,229	13,783	20,620	38,554	-4	16,184	86,475	2,141	129,234	266,029

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Total equals refinery fuel use and loss.

<sup>3</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

**I Supply and Disposition of Crude Oil and Petroleum Products, April 1982**  
(Thousands of Barrels)

Commodity	Supply					Disposition					
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Used Directly and Losses <sup>2</sup>	Net Receipts	Refinery Inputs	Exports	Products Supplied	Ending Stocks
Crude Oil (including lease condensate)	E 125,466	0	42,523	-4,414	-25,750	-56	16,939	154,708	0	0	414,347
Natural Gas Plant Liquids and LRGs	34,648	3,300	1,125	5,089	0	0	-5,709	8,286	1,221	28,947	83,124
Liquefied Petroleum Gases	21,304	3,120	1,125	3,124	0	0	-4,951	3,437	1,221	19,065	67,694
Ethane	7,086	180	0	20	0	0	0	178	0	7,108	3,883
Other Products <sup>3</sup>	6,258	0	0	1,945	0	0	-758	4,671	0	2,774	11,547
Other Liquids	774	0	1,459	647	0	0	-1,975	9,172	0	-8,267	68,349
Other Hydrocarbons and Alcohol	774	0	0	-7	0	0	0	767	0	0	89
Unfinished Oils	0	0	1,355	-723	0	0	-1,122	5,072	0	-5,562	50,430
Motor Gasoline Blending Components	0	0	104	1,251	0	0	-853	3,291	0	-2,789	17,649
Aviation Gasoline Blending Components	0	0	0	126	0	0	0	42	0	84	181
Finished Petroleum Products	349	175,446	4,473	4,130	0	12	-85,137	0	8,821	90,651	123,725
Finished Motor Gasoline	0	79,714	242	3,419	0	0	-50,759	0	865	31,751	45,727
Finished Leaded Motor Gasoline	0	36,575	(s)	1,841	0	0	-23,173	0	865	14,378	23,433
Finished Unleaded Motor Gasoline	0	43,138	242	1,591	0	0	-27,579	0	0	17,392	22,277
Gasohol	0	1	0	-13	0	0	-7	0	0	-19	17
Finished Aviation Gasoline	50	282	0	127	0	0	-322	0	0	136	771
Naphtha-Type Jet Fuel	0	2,609	0	277	0	0	-863	0	22	2,001	2,718
Kerosene-Type Jet Fuel	2	12,898	0	-501	0	0	-9,724	0	0	2,675	12,350
Kerosene	3	2,663	90	-468	0	0	-504	0	20	1,764	3,026
Distillate Fuel Oil	(s)	33,157	19	-761	0	12	-16,919	0	1,102	14,407	28,230
Residual Fuel Oil	0	15,081	3,008	1,192	0	0	-3,770	0	3,831	11,690	13,495
Naphtha and Other Oils for Petro. Feed	0	9,695	802	221	0	0	-1	0	472	10,245	3,216
Special Naphthas	96	1,066	250	153	0	0	-466	0	427	672	1,549
Lubricants	0	2,607	60	323	0	0	-1,364	0	272	1,354	5,912
Waxes	0	208	1	13	0	0	-5	0	5	212	370
Petroleum Coke	0	4,499	0	-62	0	0	0	0	1,597	2,840	728
Asphalt	0	1,964	0	390	0	0	-226	0	1	2,127	3,927
Road Oil	0	0	0	0	0	0	0	0	0	0	2
Still Gas	0	7,439	0	0	0	0	0	0	0	7,439	0
Miscellaneous Products	198	1,564	(s)	-193	0	0	-214	0	8	1,347	1,705
Total	161,237	178,746	49,580	5,452	-25,750	-44	-75,882	172,166	9,842	111,331	689,545

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Total equals refinery fuel use and loss.

<sup>3</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 9. PAD District IV Supply and Disposition of Crude Oil and Petroleum Products, April 1982  
(Thousands of Barrels)

Commodity	Supply					Disposition			Ending Stocks		
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Used Directly and Losses <sup>2</sup>	Net Receipts	Refinery Inputs		Exports	Products Supplied
Crude Oil (including lease condensate) .....	E 17,886	0	1,049	94	-8,319	-10	0	10,700	0	0	15,986
Natural Gas Plant Liquids and LRGs .....	2,137	42	345	12	0	0	-201	445	0	1,888	1,136
Liquefied Petroleum Gases .....	757	42	308	21	0	0	91	264	0	954	883
Ethane .....	16	0	0	(s)	0	0	0	0	0	16	(s)
Other Products <sup>3</sup> .....	1,364	0	37	-9	0	0	-292	182	0	918	253
Other Liquids .....	41	0	0	867	0	0	0	536	0	372	5,975
Other Hydrocarbons and Alcohol .....	41	0	0	1	0	0	0	42	0	0	0
Unfinished Oils .....	0	0	0	352	0	0	0	-73	0	425	2,856
Motor Gasoline Blending Components .....	0	0	0	514	0	0	0	567	0	-53	3,119
Aviation Gasoline Blending Components .....	0	0	0	0	0	0	0	0	0	0	0
Finished Petroleum Products .....	20	11,792	1	1,159	0	10	257	0	1	13,238	14,491
Finished Motor Gasoline .....	5	6,228	0	667	0	0	-39	0	0	6,861	5,830
Finished Leaded Motor Gasoline .....	3	3,994	0	471	0	0	-165	0	0	4,303	3,788
Finished Unleaded Motor Gasoline .....	2	2,234	0	196	0	0	119	0	0	2,551	2,040
Gasohol .....	0	0	0	0	0	0	7	0	0	7	2
Finished Aviation Gasoline .....	0	28	0	3	0	0	5	0	0	36	59
Naphtha-Type Jet Fuel .....	0	452	0	-16	0	0	-103	0	0	333	310
Kerosene-Type Jet Fuel .....	0	506	0	13	0	0	486	0	0	1,005	611
Kerosene .....	0	8	0	18	0	0	0	0	0	26	56
Distillate Fuel Oil .....	0	2,971	(s)	555	0	0	-111	0	0	3,416	3,142
Residual Fuel Oil .....	0	340	0	27	0	10	0	0	0	377	523
Naphtha and Other Oils for Petro. Feed. ....	0	0	0	0	0	0	0	0	1	-1	0
Special Naphthas .....	0	7	(s)	-2	0	0	0	0	0	5	4
Lubricants .....	0	32	(s)	-6	0	0	19	0	(s)	45	101
Waxes .....	0	6	0	-3	0	0	0	0	(s)	3	9
Petroleum Coke .....	0	300	0	28	0	0	0	0	(s)	328	540
Asphalt .....	0	445	0	-126	0	0	0	0	(s)	319	3,301
Road Oil .....	0	8	0	-1	0	0	0	0	0	7	4
Still Gas .....	0	444	0	0	0	0	0	0	0	444	0
Miscellaneous Products .....	15	17	0	2	0	0	0	0	(s)	34	1
Total .....	20,084	11,834	1,394	2,132	-8,319	0	56	11,682	1	15,498	37,586

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Total equals refinery fuel use and loss.

<sup>3</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

District V Supply and Disposition of Crude Oil and Petroleum Products, April 1982  
Thousands of Barrels

Commodity	Supply					Net Receipts	Disposition			Ending Stocks	
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>		Crude Used Directly and Losses <sup>2</sup>	Refinery Inputs	Exports		Products Supplied
Crude Oil (including lease condensate)	83,880	0	4,467	4,757	-4,362	-1,954	-21,377	60,934	4,477	0	81,361
Natural Gas Plant Liquids and LRGs	587	1,354	458	142	0	0	0	1,031	251	1,259	1,421
Liquefied Petroleum Gases	290	1,343	458	41	0	0	0	633	251	1,247	1,333
Ethane	(s)	11	0	(s)	0	0	0	0	0	11	(s)
Other Products <sup>3</sup>	297	0	0	101	0	0	0	398	0	(s)	88
Other Liquids	569	0	174	470	0	0	0	1,322	0	-109	35,293
Other Hydrocarbons and Alcohol	569	0	0	1	0	0	0	570	0	0	3
Unfinished Oils	0	0	174	-725	0	0	0	-804	0	253	27,108
Motor Gasoline Blending Components	0	0	0	1,215	0	0	0	1,577	0	-362	8,005
Aviation Gasoline Blending Components	0	0	0	-21	0	0	0	-21	0	0	177
Finished Petroleum Products	0	64,884	2,168	1,522	0	1,930	3,901	0	6,010	68,395	54,734
Finished Motor Gasoline	0	27,839	885	1,017	0	0	1,915	0	123	31,533	17,539
Finished Leaded Motor Gasoline	0	12,989	513	869	0	0	891	0	123	15,138	8,551
Finished Unleaded Motor Gasoline	0	14,793	373	145	0	0	1,024	0	0	16,335	8,982
Gasohol	0	57	0	3	0	0	0	0	0	60	6
Finished Aviation Gasoline	0	122	0	19	0	0	0	0	0	141	571
Naphtha-Type Jet Fuel	0	1,592	0	-111	0	0	258	0	(s)	1,739	1,491
Kerosene-Type Jet Fuel	0	5,775	0	-113	0	0	303	0	44	5,921	7,107
Kerosene	0	172	0	3	0	0	0	0	(s)	175	157
Distillate Fuel Oil	0	9,281	273	300	0	373	457	0	816	9,867	11,137
Residual Fuel Oil	0	11,455	707	425	0	1,557	495	0	3,181	11,458	9,901
Naphtha and Other Oils for Petro. Feed	0	460	130	31	0	0	30	0	85	565	367
Special Naphthas	0	63	173	39	0	0	0	0	1	275	306
Lubricants	0	373	(s)	-13	0	0	236	0	54	542	1,428
Waxes	0	66	0	-3	0	0	0	0	3	60	59
Petroleum Coke	0	3,112	0	92	0	0	0	0	1,697	1,507	1,434
Asphalt	0	1,320	0	-178	0	0	238	0	2	1,378	2,804
Road Oil	0	174	0	-6	0	0	0	0	0	168	26
Still Gas	0	2,881	0	0	0	0	0	0	0	2,881	0
Miscellaneous Products	0	199	(s)	20	0	0	-31	0	3	185	407
Total	85,036	66,236	7,267	6,891	-4,362	-24	-17,476	63,287	10,738	69,545	172,809

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Total equals refinery fuel use and loss.

<sup>3</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 11. Production of Crude Oil (including Lease Condensate) by PAD District and State, for the Most Current Month, 1 February 1982  
(Thousands of Barrels)

PAD District and State	Production	
	Total	Daily Average
<b>PAD District I</b>		
Florida .....	2,154	77
New York .....	E 61	2
Pennsylvania .....	E 187	7
Virginia .....	0	0
West Virginia .....	E 179	6
<b>Total</b> .....	E 2,581	92
<b>PAD District II</b>		
Illinois .....	1,800	64
Indiana .....	E 524	19
Kansas .....	5,119	183
Kentucky .....	494	18
Michigan .....	2,624	94
Missouri .....	E 6	(s)
Nebraska .....	532	19
North Dakota .....	3,397	121
Ohio .....	E 1,042	37
Oklahoma .....	14,030	501
South Dakota .....	86	3
Tennessee .....	61	2
<b>Total</b> .....	E 29,715	1,061
<b>PAD District III</b>		
Alabama .....	1,603	57
Arkansas .....	1,423	51
Louisiana .....		
Gulf Coast .....	31,503	1,125
Rest Of State .....	2,769	99
<b>Total Louisiana</b> .....	34,272	1,224
Mississippi .....	2,602	93
<b>New Mexico</b>		
Northwestern .....	524	19
Southeastern .....	4,939	176
<b>Total New Mexico</b> .....	5,463	195
<b>Texas</b>		
TRRC District 01 .....	2,002	72
TRRC District 02 .....	3,101	111
TRRC District 03 .....	10,465	374
TRRC District 04 .....	2,225	79
TRRC District 05 .....	638	23
TRRC District 06, excluding East Texas .....	3,349	120
TRRC District 07B .....	2,476	88
TRRC District 07C .....	2,555	91
TRRC District 08 .....	17,722	633
TRRC District 08A .....	18,607	665
TRRC District 09 .....	2,826	101
TRRC District 10 .....	1,561	56
East Texas .....	4,117	147
<b>Total Texas</b> .....	71,644	2,559
<b>Total</b> .....	117,007	4,179

—Continued

PAD District and State	Production	
	Total	Daily Average
<b>PAD District IV</b>		
Colorado .....	2,360	84
Montana .....	2,432	87
Utah .....	E 1,863	67
Wyoming .....	E 10,016	358
<b>Total</b> .....	E 16,571	595
<b>PAD District V</b>		
Alaska .....		
South Alaska .....	1,827	65
North Slope .....	45,656	1,631
<b>Total Alaska</b> .....	47,483	1,696
Arizona .....	27	1
California .....		
Central Coastal .....	5,872	210
East Central .....	18,676	667
North .....	16	1
South .....	6,252	223
<b>Total California</b> .....	30,816	1,101
Nevada .....	46	2
<b>Total</b> .....	78,372	2,799
<b>United States Total</b> .....	E 244,346	8,727

<sup>1</sup> Includes offshore production.

(s) Less than 500 barrels.

Sources: See Explanatory Notes on Data Collection and Estimation.

E Estimated.



Table 12. Offshore Production of Crude Oil (including Lease Condensate) By State, for the Most Current Month,<sup>1</sup> February 1982  
(Thousands of Barrels)

State	Offshore Production	
	Total	Daily Average
Alaska <sup>2</sup> .....	1,883	67
California .....		
Federal .....	2,114	76
State .....	3,060	109
California, Total .....	5,174	185
Louisiana .....		
Federal .....	19,569	699
State .....	1,865	67
Louisiana, Total .....	21,434	766
Texas .....		
Federal .....	1,141	41
State .....	117	4
Texas, Total .....	1,258	45
<b>United States Total .....</b>	<b>29,749</b>	<b>1,062</b>

<sup>1</sup> These production data are included in Table 11.

<sup>2</sup> All offshore production within State boundaries.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 13. Production of Lease Condensate by State, for the Most Current Month,<sup>1</sup> February 1982  
(Thousands of Barrels)

State	Lease Condensate Production	
	Total	Daily Average
Alabama .....	957	34
California .....	12	(s)
Louisiana .....	5,748	205
Mississippi .....	150	5
New Mexico .....	419	15
Oklahoma .....	999	36
Texas .....	3,572	128
<b>Total .....</b>	<b>11,857</b>	<b>423</b>

<sup>1</sup> These production data are included in Table 11. Small amounts of lease condensate are known to be produced in states other than those listed, however, statistics on this production are not available.

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 14. Natural Gas Processing Plant Production of Petroleum Products by PAD District,<sup>1</sup> April 1982  
(Thousands of Barrels)

Commodity	PAD District I			PAD District II				PAD District III				PAD District IV		United States			
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okl., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico		Total	Rocky Mts.	Dist. V West Coast
Natural Gas Plant Liquids .....	648	500	1,147	4	2,205	310	6,170	8,689	17,625	2,478	10,325	616	3,603	34,648	2,137	587	47,208
Isopentane .....	0	0	0	0	0	0	356	356	416	21	122	0	0	560	2	0	919
Natural Gasoline .....	86	32	118	0	79	81	1,127	1,287	2,001	1,107	1,332	120	276	4,836	388	314	6,943
Unfractionated Stream .....	0	182	182	4	953	49	-2,891	-1,885	6,936	-12,032	2,562	20	2,384	-131	966	-17	-885
Plant Condensate .....	0	0	0	0	50	0	37	87	200	867	38	-113	2	993	8	0	1,089
Liquefied Petroleum Gases and Ethane .....	561	286	847	0	1,122	180	7,541	8,844	8,071	12,516	6,271	590	941	28,390	773	290	39,143
Ethane .....	214	149	362	0	455	0	1,114	1,568	1,451	3,069	2,428	64	73	7,086	16	(8)	9,033
Propane .....	211	92	303	0	525	111	3,005	3,641	2,837	3,738	2,132	154	420	9,280	493	181	13,899
Butane .....	117	29	146	0	94	59	1,316	1,469	1,325	2,045	798	218	210	4,595	258	53	6,522
Butane-Propane Mixtures .....	0	0	0	0	2	0	0	2	50	24	3	6	0	83	2	33	121
Ethane-Propane Mixtures .....	0	0	0	0	0	0	1,591	1,591	1,829	2,633	215	(8)	166	4,843	0	0	6,434
Isobutane .....	20	16	36	0	46	10	516	572	580	1,007	695	148	73	2,503	3	23	3,136
Finished Motor Gasoline .....	51	0	51	0	0	0	0	0	0	0	0	0	0	0	0	0	55
Finished Leaded Motor Gasoline .....	51	0	51	0	0	0	0	0	0	0	0	0	0	0	0	0	54
Finished Unleaded Motor Gasoline .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Gasohol .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Aviation Gasoline .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Naphtha-Type Jet Fuel .....	0	0	0	0	0	0	0	0	50	0	0	0	0	50	0	0	50
Kerosene-Type Jet Fuel .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kerosene .....	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	2
Distillate Fuel Oil .....	0	0	0	0	0	0	0	0	1	0	0	(8)	2	3	0	0	3
Special Naphthas .....	0	0	0	0	0	0	1	1	(8)	0	0	0	0	0	0	0	2
Miscellaneous Products .....	0	0	0	0	2	0	13	15	185	3	2	7	1	198	15	0	228
Total Production .....	699	500	1,198	4	2,207	310	6,184	8,705	17,956	2,481	10,327	624	3,606	34,995	2,157	587	47,643

<sup>1</sup> Production represents quantity of natural gas processing plant output less input to fractionating facilities.

(8) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 15. Refinery Input of Crude Oil and Petroleum Products by PAD District, April 1982  
(Thousands of Barrels, Except Where Noted)

Commodity	PAD District I			PAD District II					PAD District III			PAD District IV		United States			
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico		Total	Rocky Mt.	Dist. V West Coast
Crude Oil (Including lease condensate) .....	31,774	3,413	35,187	1,751	47,837	6,857	23,597	80,042	11,416	80,069	56,877	4,640	1,706	154,708	10,700	60,934	341,571
Natural Gas Plant Liquids																	
Natural Gasoline and Isopentane .....	25	0	25	0	363	129	844	1,336	1,497	1,465	442	79	131	3,614	109	398	5,482
Unfractionated Stream .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plant Condensate .....	0	0	0	0	102	0	17	119	62	733	15	246	1	1,057	73	0	1,249
LPG and Ethane .....	240	21	261	141	1,676	357	753	2,927	496	1,171	1,805	137	6	3,615	264	633	7,700
Ethane .....	0	0	0	0	0	0	0	0	0	88	90	0	0	178	0	0	178
Propane .....	0	0	0	0	41	0	0	41	0	0	0	0	0	50	1	0	92
Normal Butane .....	77	12	89	60	502	220	142	1,024	76	467	793	36	0	1,372	49	150	2,684
Other Butanes .....	0	0	0	0	198	94	92	384	72	80	0	1	0	153	157	177	871
Butane-Propane Mixtures .....	0	0	0	0	6	0	0	6	9	74	13	0	0	96	7	0	109
Ethane-Propane Mixtures .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Isobutane .....	163	9	172	81	829	43	519	1,472	339	462	859	100	6	1,766	50	366	3,766
Other Liquids																	
Other Hydrocarbons .....	62	15	77	0	164	0	9	173	11	569	187	0	0	767	42	570	1,629
Alcohol .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unfinished Oil (net) .....	2,056	-35	2,021	12	-1,504	16	589	-887	1,365	1,667	2,010	21	9	5,072	-73	-804	5,329
Motor Gasoline Blending .....																	
Components (net) .....	2,086	26	2,112	-13	2,390	43	331	2,751	-373	1,109	2,492	45	18	3,291	567	1,577	10,298
Aviation Gasoline Blending .....																	
Components (net) .....	0	0	0	0	14	0	0	14	-103	5	140	0	0	42	0	-21	35
Total Input to Refineries .....	36,243	3,440	39,683	1,891	51,042	7,402	26,140	86,475	14,371	86,788	63,968	5,168	1,871	172,166	11,682	63,287	373,293
Crude Oil Distillation																	
Gross Input (daily average) .....	1,096	114	1,210	63	1,620	242	795	2,721	441	2,680	2,047	165	61	5,394	361	2,079	11,765
Operable Capacity (daily average) .....	1,663	162	1,826	66	2,531	295	1,150	4,042	654	4,447	2,816	290	123	8,330	630	3,140	17,967
Operating Ratio (percent) <sup>1</sup> .....	65.9	70.1	66.3	96.2	64.0	82.1	69.1	67.3	67.4	60.3	72.7	56.7	49.8	64.7	57.4	66.2	65.5
Crude Oil Qualities																	
Sulfur Content, Weighted Average (percent) .....	1.07	.29	1.00	.58	.87	1.59	.67	.87	.45	.98	.79	1.68	.39	.89	.89	1.00	.91
API Gravity, Weighted Average .....	31.35	39.31	32.13	33.9	35.79	31.33	37.69	35.92	39.08	34.89	34.01	31.57	30.13	34.73	36.15	25.88	33.16

<sup>1</sup> Represents gross input divided by operable capacity.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 16. Refinery Production of Petroleum Products by PAD District, April 1982  
(Thousands of Barrels)

Commodity	PAD District I			PAD District II				PAD District III				PAD District IV			United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total		Dist. IV Rocky Mt.	Dist. V West Coast
Liquefied Petroleum Gases and Ethane	1,272	72	1,344	31	1,252	122	382	1,787	201	2,145	822	85	47	3,300	42	1,354	7,827
For Petrochemical Feedstock Use	370	0	370	0	170	2	41	213	24	1,227	354	9	0	1,614	-15	182	2,364
For Other Uses	902	72	974	31	1,082	120	341	1,574	177	918	468	76	47	1,686	57	1,172	5,463
Ethane	0	0	0	0	22	0	0	22	0	178	2	0	0	180	0	11	213
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	178	2	0	0	180	0	0	180
For Other Uses	0	0	0	0	22	0	0	22	0	0	0	0	0	0	0	11	33
Propane	996	72	1,068	31	1,220	107	487	1,845	217	1,842	1,019	62	26	3,166	108	832	7,019
For Petrochemical Feedstock Use	332	0	332	0	170	0	42	212	0	785	291	0	0	1,076	3	120	1,743
For Other Uses	664	72	736	31	1,050	107	445	1,633	217	1,057	728	62	26	2,090	105	712	5,276
Butane	269	0	269	0	10	15	-105	-80	-42	76	-156	20	10	-92	-40	372	429
For Petrochemical Feedstock Use	38	0	38	0	0	2	-1	1	0	284	0	9	0	273	3	62	377
For Other Uses	231	0	231	0	10	13	-104	-81	-42	-188	-156	11	10	-365	-43	310	52
Butane-Propane Mixtures	7	0	7	0	0	0	0	0	14	49	-43	3	11	34	-5	139	175
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	12	0	0	0	0	73	0	0	73
For Other Uses	7	0	7	0	0	0	0	0	2	49	-104	3	11	-39	-5	139	102
Isobutane for Petro. Feed. Use	0	0	0	0	0	0	0	0	12	0	0	0	0	12	-21	0	-9
Finished Motor Gasoline	18,234	1,343	19,577	1,132	30,059	4,198	14,325	49,714	7,516	39,790	29,807	1,881	720	79,714	6,228	27,839	183,072
Finished Leaded Motor Gasoline	7,829	656	8,485	568	13,998	2,450	8,661	25,677	3,964	15,667	15,123	1,284	537	36,575	3,994	12,989	87,720
Finished Unleaded Motor Gasoline	10,405	687	11,092	564	16,025	1,748	5,658	23,995	3,551	24,123	14,684	597	183	43,138	2,234	14,793	95,252
Gasohol	0	0	0	0	36	0	6	42	1	0	0	0	0	1	0	57	100
Finished Aviation Gasoline	4	0	4	0	40	0	18	58	5	155	122	0	0	282	28	122	494
Naphtha-Type Jet Fuel	656	91	747	0	305	88	595	988	515	1,317	315	149	313	2,609	452	1,592	6,388
Kerosene-Type Jet Fuel	817	59	876	134	2,701	274	753	3,862	879	4,869	7,121	15	14	12,898	506	5,775	23,917
Kerosene	106	75	181	0	462	19	111	592	18	1,497	1,155	-2	-5	2,663	8	172	3,616
Distillate Fuel Oil	6,785	885	7,670	349	9,148	1,701	6,437	17,635	3,107	17,221	10,949	1,268	612	33,157	2,971	9,281	70,714
Distillate Fuel Oil Less No. 4	6,785	875	7,660	349	9,139	1,701	6,437	17,626	3,097	16,834	11,060	1,210	425	32,626	2,943	9,220	70,075
No. 4 Fuel Oil	0	10	10	0	9	0	0	9	10	387	-111	58	187	531	28	61	639
Residual Fuel Oil	4,544	129	4,673	95	2,242	267	709	3,313	777	6,973	6,832	395	104	15,081	340	11,455	34,862
Naphtha < 400 Deg. For Petro. Feed. Use	347	0	347	0	450	0	83	533	280	2,792	202	0	0	3,274	0	216	4,370
Other Oils > 400 Deg. For Petro. Feed. Use	4	56	60	0	1,150	0	0	1,150	155	3,511	2,724	31	0	6,421	0	244	7,875
Special Naphthas	7	12	19	0	170	0	114	284	117	700	87	162	0	1,066	7	63	1,439
Lubricants	255	372	627	0	511	0	376	887	14	1,909	514	170	0	2,607	32	373	4,526
Bright Stock	-1	110	109	0	10	0	23	33	0	134	39	0	0	173	1	28	344
Neutral	93	245	338	0	375	0	269	644	0	649	424	83	0	1,156	32	266	2,436
Other Grades	163	17	180	0	126	0	84	210	14	1,126	51	87	0	1,278	-1	79	1,746
Wax	20	77	97	0	6	0	29	35	3	107	70	28	0	208	6	66	412
Microcrystalline	0	26	26	0	0	0	23	23	3	10	0	28	0	41	0	90	181
Crystalline-Fully Refined	9	14	23	0	5	0	2	7	0	33	70	0	0	103	6	42	181
Crystalline-Other	11	37	48	0	1	0	4	5	0	64	0	0	0	64	0	24	141
Petroleum Coke	1,121	48	1,169	23	1,835	326	878	3,062	274	2,406	1,711	108	0	4,499	300	3,112	12,142
Marketable	378	0	378	0	1,051	212	508	1,771	62	1,117	1,029	85	0	2,293	184	2,300	6,926
Catalyst	743	48	791	23	784	114	370	1,291	212	1,289	682	23	0	2,206	116	812	5,216
Asphalt	1,723	86	1,809	95	1,257	376	765	2,493	272	386	532	722	52	1,964	445	1,320	8,031
Road Oil	0	0	0	0	9	0	5	14	0	0	0	0	0	0	8	174	196
Still Gas	1,433	118	1,551	67	2,248	252	1,116	3,683	354	4,466	2,435	164	20	7,439	444	2,881	15,998
For Petrochemical Feedstock Use	28	0	28	0	1	0	0	1	0	411	101	0	0	512	12	4	557
For Other Uses	1,405	118	1,523	67	2,247	252	1,116	3,682	354	4,055	2,334	164	20	6,927	432	2,877	15,441
Miscellaneous Products	362	19	381	3	53	23	60	139	91	992	451	32	-2	1,564	17	199	2,300
Total Output	37,690	3,442	41,132	1,929	53,898	7,646	26,756	90,229	14,578	91,236	65,849	5,208	1,875	178,746	11,834	66,238	388,179
Processing Gain(-) or Loss(+) <sup>1</sup>	-1,447	-2	-1,449	-38	-2,856	-244	-616	-3,754	-207	-4,448	-1,881	-40	-4	-6,560	-152	-2,951	-14,886

1 Represents the arithmetic difference between input and output.  
Notes: Total may not equal sum of components due to independent rounding.  
See Explanatory Notes on negative product yield.  
Source: See Explanatory Notes on Data Collection and Estimation.

Table 17. Percent Refinery Yield of Petroleum Products by PAD District,<sup>1</sup> April 1982

Commodity	PAD District I			PAD District II				PAD District III				PAD District IV			United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La., Gulf Coast	No. La., Ark.	New Mexico	Total		Rocky Mts.	Dist. V West Coast
Finished Motor Gasoline <sup>2</sup>	46.8	37.9	46.0	56.9	54.7	53.4	51.1	53.6	45.6	42.5	42.2	29.5	32.9	42.2	48.7	41.0	45.2
Finished Aviation Gasoline <sup>3</sup>	(s)	.0	(s)	.0	.1	.0	.1	.1	.8	.2	(s)	.0	.0	.2	.3	.2	.1
Liquefied Refinery Gases & Ethane	3.8	2.1	3.6	1.8	2.7	1.8	1.6	2.3	1.6	2.6	1.4	1.8	2.7	2.1	.4	2.3	2.3
Naphtha-Type Jet Fuel	1.9	2.7	2.0	0	.7	1.3	2.5	1.2	4.0	1.6	.5	3.2	18.3	1.6	4.3	2.6	1.8
Kerosene-Type Jet Fuel	2.4	1.7	2.4	7.6	5.8	4.0	3.1	4.9	6.9	6.0	12.1	.3	.8	8.1	4.8	9.6	6.9
Kerosene	.3	2.2	.5	0	1.0	.3	.5	.7	.1	1.8	2.0	(s)	-3	1.7	.1	.3	1.0
Distillate Fuel Oil	20.1	26.2	20.6	19.8	19.7	24.7	26.6	22.3	24.3	21.1	18.6	27.2	35.7	20.8	28.0	15.4	20.4
Residual Fuel Oil	13.4	3.8	12.6	5.4	4.8	3.9	2.9	4.2	6.1	8.5	11.6	8.5	6.1	9.4	3.2	19.1	10.0
Naphtha < 400 Deg. F. Petro. Feed. Use	1.0	0	.9	0	1.0	0	.3	.7	2.2	3.4	.3	.0	0	2.0	0	.4	1.3
Other Oils > 400 Deg. F. Petro. Feed. Use	(s)	1.7	.2	0	2.5	0	.0	1.5	1.2	4.3	4.6	.7	0	4.0	0	.4	2.3
Special Naphthas	(s)	.4	.1	.0	.4	0	.5	.4	.9	.9	.1	3.5	0	.7	.1	.1	.4
Lubricants	.8	11.0	1.7	0	1.1	0	1.6	1.1	.1	2.3	.9	3.6	.0	1.6	.3	.6	1.3
Wax	.1	2.3	.3	0	(s)	0	.1	(s)	(s)	.1	.1	.6	0	.1	.1	.1	.1
Petroleum Coke	3.3	1.4	3.1	1.3	4.0	4.7	3.6	3.9	2.1	2.9	2.9	2.3	0	2.8	2.8	5.2	3.5
Asphalt	5.1	2.5	4.9	5.4	2.7	5.5	3.2	3.1	2.1	.5	.9	15.5	3.0	1.2	4.2	2.2	2.3
Road Oil	0	0	0	0	(s)	0	(s)	(s)	0	0	0	.0	0	.0	.1	.3	.1
Still Gas for Petro. Feed. Use	.1	0	.1	0	(s)	0	0	(s)	0	.5	.2	0	0	.3	.1	(s)	.2
Still Gas for Other Uses	4.2	3.5	4.1	3.8	4.8	3.7	4.6	4.7	2.8	5.0	4.0	3.5	1.2	4.3	4.1	4.8	4.5
Miscellaneous Products	1.1	.6	1.0	.2	.1	.3	.2	.2	.7	1.2	.8	.7	-1	1.0	.2	.3	.7
Processing Gain(-) or Loss(+) <sup>4</sup>	-4.3	-1	-3.9	-2.2	-6.2	-3.6	-2.5	-4.7	-1.6	-5.4	-3.2	-9	-2	-4.1	-1.4	-4.9	-4.3

<sup>1</sup> Based on crude oil input and net returns of unfinished oils.<sup>2</sup> Based on total finished motor gasoline output plus net output of motor gasoline blending components, minus input of natural gas plant liquids, other hydrocarbons and alcohol.<sup>3</sup> Based on finished aviation gasoline output plus net output of aviation gasoline blending components.<sup>4</sup> Represents the arithmetic difference between input and production.

(s) Less than 0.05 percent.

Note: Total may not equal sum of components due to independent rounding.

See Explanatory Notes on negative product yields.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 18. Refinery Receipts of Crude Oil by PAD District, April 1982  
(Thousands of Barrels)

Method	PAD District I				PAD District II				PAD District III				PAD District IV		United States
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ky.	Minn., Wisc., Dak.	Okla., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Coast	No. La., Ark.	New Mexico	Total	
Pipeline															
Domestic	0	2,564	2,564	1,527	39,244	3,419	21,269	65,479	9,225	51,036	30,925	3,214	1,393	95,793	201,096
Foreign	0	112	112	207	7,625	2,912	957	11,711	1,161	8,871	2,894	432	0	13,358	26,552
Tanker															
Domestic	3,415	0	3,415	0	0	0	0	0	0	5,010	6,882	0	0	11,892	45,336
Foreign	23,270	0	23,270	0	0	0	0	0	0	10,176	10,201	0	0	20,377	47,872
Barge															
Domestic	0	177	177	0	1,127	0	0	1,127	0	3,797	4,571	8	0	8,376	9,946
Foreign	4,187	0	4,187	0	422	0	0	422	0	55	357	131	0	543	5,152
Tank Cars															
Domestic	69	269	338	0	0	0	0	0	0	0	0	22	0	22	472
Foreign	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks															
Domestic	0	337	337	119	241	12	1,041	1,413	856	212	445	806	505	2,824	6,847
Foreign	0	0	0	0	0	0	0	0	167	0	0	0	0	167	167
Total															
Domestic	3,484	3,347	6,831	1,546	40,612	3,431	22,330	68,019	10,081	60,055	42,823	4,050	1,898	118,907	263,697
Foreign	27,457	112	27,569	207	8,047	2,912	967	12,133	1,328	19,102	13,452	563	0	34,445	79,743

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 19. Fuels Consumed at Refineries by PAD District, April 1982  
(Thousands of Barrels, Except Where Noted)

Commodity	PAD District I				PAD District II				PAD District III				PAD District IV		United States
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ky.	Minn., Wisc., Dak.	Okla., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Coast	No. La., Ark.	New Mexico	Total	
Crude Oil (including lease condensate)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Liquefied Petroleum Gases <sup>1</sup>	19	14	33	10	295	29	39	373	24	124	257	0	0	404	1,210
Unfinished Oils	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distillate Fuel Oil	59	26	86	0	8	0	0	8	2	0	0	0	0	5	104
Residual Fuel Oil	643	60	703	9	260	50	56	376	3	198	62	11	0	276	1,762
Marketable Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72
Catalyst Petroleum Coke	609	48	657	23	716	64	331	1,134	213	1,289	682	23	0	2,207	4,925
Sill Gas	1,206	118	1,325	67	2,143	251	997	3,458	279	3,989	2,241	159	20	6,688	14,726
Other Fuels <sup>2</sup>	0	0	0	0	66	0	0	66	6	0	(s)	0	0	6	152
Natural Gas (million cubic feet)	2,068	251	2,319	48	2,239	49	4,070	6,406	2,708	19,081	5,525	891	148	28,353	42,616
Coal (thousand short tons)	0	14	14	0	0	0	0	0	0	0	0	0	0	0	14
Purchased Electricity (million kWh)	347	36	384	15	342	45	724	1,127	77	640	350	22	7	1,096	3,176
Purchased Steam (million pounds)	688	9	696	0	462	0	0	462	16	0	720	0	0	736	2,671

<sup>1</sup> Includes liquefied refinery gases.

<sup>2</sup> Includes small quantities of other petroleum products (e.g., unfinished oils, kerosene, etc.) consumed at refineries.

(s) Less than 500 barrels except where noted.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 20. Imports of Crude Oil and Petroleum Products by PAD District, April 1982  
(Thousands of Barrels)

Commodity	Petroleum Administration for Defense Districts					Total
	I	II	III	IV	V	
<b>Crude Oil (including lease condensate) <sup>1 2</sup></b>	<b>26,536</b>	<b>9,803</b>	<b>42,523</b>	<b>1,049</b>	<b>4,467</b>	<b>84,377</b>
<b>Natural Gas Liquids</b>	<b>345</b>	<b>3,530</b>	<b>1,125</b>	<b>345</b>	<b>458</b>	<b>5,803</b>
Natural Gasoline and Isopentane	0	0	0	0	0	0
Plant Condensate	135	0	0	37	0	172
Liquefied Petroleum Gases and Ethane	210	3,530	1,125	308	458	5,631
Ethane	0	1,207	0	0	0	1,207
Propane	128	518	0	207	114	968
Butane	82	834	0	101	344	1,361
Butane-Propane Mixtures	0	0	1,125	0	0	1,125
Ethane-Propane Mixtures	0	971	0	0	0	971
<b>Other Liquids <sup>1</sup></b>	<b>1,903</b>	<b>96</b>	<b>1,459</b>	<b>0</b>	<b>174</b>	<b>3,633</b>
Unfinished Oils <sup>1</sup>	1,150	52	1,355	0	174	2,731
Motor Gasoline Blending Components	754	44	104	0	0	902
<b>Finished Petroleum Products</b>	<b>27,780</b>	<b>354</b>	<b>4,473</b>	<b>1</b>	<b>2,168</b>	<b>34,776</b>
Finished Motor Gasoline	4,193	2	242	0	885	5,323
Finished Leaded Motor Gasoline	3,091	0	(s)	0	513	3,604
Finished Unleaded Motor Gasoline	1,102	2	242	0	373	1,719
Finished Aviation Gasoline	0	0	0	0	0	0
Naphtha-Type Jet Fuel	182	0	0	0	0	182
Kerosene-Type Jet Fuel	1,242	0	0	0	0	1,242
Bonded Aircraft Fuel	0	0	0	0	0	0
Other	1,242	0	0	0	0	1,242
Kerosene	500	0	90	0	0	590
Distillate Fuel Oil	1,487	1	19	(s)	273	1,779
Bonded ships bunkers	0	0	0	0	0	0
For military offshore use	0	0	0	0	0	0
No. 2 fuel oil	1,487	1	19	(s)	273	1,779
No. 4 fuel oil	0	0	0	0	0	0
Residual Fuel Oil	18,998	250	3,008	0	707	22,963
Bonded ships bunkers	0	0	0	0	0	0
For military offshore use	0	0	0	0	0	0
Other	18,998	250	3,008	0	707	22,963
Naphtha < 400 Deg. for Petro. Feed. Use	707	0	802	0	130	1,639
Other Oils > 400 Deg. for Petro. Feed. Use	0	0	0	0	0	0
Special Naphthas	337	76	250	(s)	173	836
Lubricants	116	10	60	(s)	(s)	187
Wax	2	4	1	0	0	7
Asphalt	114	5	0	0	0	118
Miscellaneous Products	2	6	(s)	0	(s)	9
<b>Total Imports</b>	<b>56,564</b>	<b>13,783</b>	<b>49,580</b>	<b>1,394</b>	<b>7,267</b>	<b>128,589</b>

<sup>1</sup> Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

<sup>2</sup> Includes crude oil imported for storage in the Strategic Petroleum Reserve.

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 21. Imports of Crude Oil and Petroleum Products by Source and PAD District, April 1982  
(Thousands of Barrels)

Source	Crude Oil 1	LPG and Ethane	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kerosene	Distill. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Products 2	Total Products	Total Petroleum	Total (Daily Average)
All PAD Districts														
<b>Arab OPEC</b>														
Algeria .....	2	0	0	489	0	0	0	0	2,047	0	0	2,537	2,539	85
Catar .....	650	0	0	0	0	0	0	0	0	0	0	0	650	22
Saudi Arabia .....	14,377	0	0	0	0	0	0	0	0	0	0	0	14,377	479
United Arab Emirates .....	3,654	0	0	0	0	0	0	0	0	0	0	0	3,654	122
Subtotal Arab OPEC .....	18,684	0	0	489	0	0	0	0	2,047	0	0	2,537	21,221	707
<b>Other OPEC</b>														
Ecuador .....	650	0	0	0	0	0	0	0	311	0	0	311	961	32
Gabon .....	756	0	0	0	0	0	0	0	0	0	0	0	756	25
Indonesia .....	6,127	0	0	0	164	0	0	70	84	0	0	317	6,444	215
Nigeria .....	12,824	0	0	0	0	0	0	0	0	0	0	0	12,824	427
Venezuela .....	4,199	0	706	0	0	217	500	0	6,488	120	113	8,144	12,343	411
Subtotal Other OPEC .....	24,555	0	706	0	164	217	500	70	6,882	120	113	8,773	33,328	1,111
<b>Other</b>														
Angola .....	466	0	0	0	0	0	0	0	0	0	0	0	466	16
Australia .....	0	38	0	0	0	0	0	0	253	0	0	291	291	10
Bahamas .....	0	0	697	0	0	0	0	94	1,223	0	0	2,014	2,014	67
Brazil .....	770	0	0	0	111	0	0	0	366	0	0	477	1,247	42
Brunei .....	0	0	0	0	61	0	0	39	25	0	0	125	125	4
Canada .....	5,334	4,468	53	44	2	98	0	51	332	112	207	5,366	10,700	357
Congo .....	1	0	0	0	0	0	0	0	0	0	0	0	1	(s)
Egypt .....	1,764	0	0	0	0	0	0	0	0	315	(s)	315	2,079	69
France .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Malaysia .....	548	0	0	0	0	0	0	0	0	0	0	0	548	18
Mexico .....	12,400	1,125	0	0	(s)	0	90	49	343	0	1	1,608	14,007	467
Netherlands .....	1	0	0	74	840	0	0	0	(s)	21	(s)	934	936	31
Netherlands Antilles .....	0	0	388	0	0	131	0	0	4,892	0	0	5,411	5,411	180
Norway .....	1,780	0	0	0	0	0	0	0	0	0	0	0	1,780	59
Oman .....	2,550	0	0	0	0	0	0	0	0	0	0	0	2,550	85
People's Republic of China .....	0	0	174	0	641	0	0	0	0	160	0	975	975	33
Peru .....	767	0	0	0	0	0	0	34	284	0	0	318	1,085	36
Puerto Rico .....	0	0	296	0	273	230	0	0	0	0	288	1,088	1,088	36
Romania .....	0	0	0	0	498	0	0	0	0	0	0	498	498	17
Trinidad and Tobago .....	4,012	0	152	0	0	0	0	0	792	0	30	973	4,985	166
Tunisia .....	976	0	0	0	436	0	0	0	0	0	0	0	976	33
United Kingdom .....	6,966	(s)	0	0	0	0	0	0	0	0	(s)	437	7,402	247
Virgin Islands .....	0	0	0	18	1,255	567	0	1,383	3,382	68	1,303	7,975	7,975	266
Yugoslavia .....	4	0	0	0	0	0	0	0	0	0	0	0	4	(s)
Zaire .....	847	0	0	0	0	0	0	0	0	0	0	0	847	28
Other Western Hemisphere .....	272	0	0	13	276	0	0	0	711	19	(s)	1,018	1,290	43
Other Eastern Hemisphere .....	1,682	(s)	264	264	766	182	0	60	1,332	23	190	3,080	4,763	159
Subtotal Other .....	41,138	5,631	2,025	413	5,159	1,206	90	1,709	13,934	716	2,020	32,903	74,040	2,468
<b>Total Imports .....</b>	<b>84,377</b>	<b>5,631</b>	<b>2,731</b>	<b>902</b>	<b>5,323</b>	<b>1,424</b>	<b>590</b>	<b>1,779</b>	<b>22,863</b>	<b>836</b>	<b>2,132</b>	<b>44,212</b>	<b>128,589</b>	<b>4,286</b>

See footnotes at end of table.



Table 21. Imports of Crude Oil and Petroleum Products by Source and PAD District, April 1982  
(Thousands of Barrels)  
(continued)

Source	Crude Oil 1	LPG and Ethane	Unfin-ished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kero-sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod-ucts 2	Total Prod-ucts	Total Petro-leum	Total (Daily Average)
PAD District I														
<b>Arab OPEC</b>														
Algeria .....	1	0	0	489	0	0	0	0	2,038	0	0	2,528	2,529	84
Saudi Arabia .....	5,379	0	0	0	0	0	0	0	0	0	0	0	5,379	179
Subtotal Arab OPEC .....	5,380	0	0	489	0	0	0	0	2,038	0	0	2,528	7,908	264
<b>Other OPEC</b>														
Ecuador .....	0	0	0	0	0	0	0	0	311	0	0	311	311	10
Gabon .....	554	0	0	0	0	0	0	0	0	0	0	0	554	18
Indonesia .....	2,391	0	0	0	0	0	0	0	0	0	0	0	2,391	80
Nigeria .....	6,256	0	0	0	0	0	0	0	0	0	0	0	6,256	209
Venezuela .....	2,943	0	464	0	0	217	500	0	4,674	0	113	5,968	8,911	297
Subtotal Other OPEC .....	12,144	0	464	0	0	217	500	0	4,985	0	113	6,279	18,423	614
<b>Other</b>														
Angola .....	466	0	0	0	0	0	0	0	0	0	0	0	466	16
Australia .....	0	0	0	0	0	0	0	0	253	0	(s)	253	253	8
Bahamas .....	0	0	0	0	0	0	0	94	1,223	0	0	1,317	1,317	44
Brazil .....	770	0	0	0	111	0	0	0	366	0	0	477	1,247	42
Canada .....	0	210	1	(s)	0	98	0	10	283	23	144	768	768	26
Egypt .....	0	0	0	0	0	0	0	0	0	315	(s)	315	315	10
France .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Mexico .....	1,222	0	0	0	0	0	0	0	0	0	1	1	1,223	41
Netherlands .....	1	0	0	0	840	0	0	0	(s)	0	(s)	840	841	28
Netherlands Antilles .....	0	0	388	0	0	131	0	0	4,414	0	0	4,933	4,933	164
Norway .....	1,392	0	0	0	0	0	0	0	0	0	0	0	1,392	46
Peru .....	406	0	0	0	0	0	0	0	0	0	0	0	406	14
Puerto Rico .....	0	0	296	0	273	230	0	0	0	0	203	1,003	1,003	33
Romania .....	0	0	0	0	498	0	0	0	0	0	0	498	498	17
Trinidad and Tobago .....	467	0	0	0	0	0	0	0	465	0	0	465	932	31
United Kingdom .....	3,931	(s)	0	0	436	0	0	0	0	0	(s)	437	4,367	146
Virgin Islands .....	0	0	0	0	1,255	567	0	1,383	3,382	0	615	7,202	7,202	240
Yugoslavia .....	4	0	0	0	0	0	0	0	0	0	0	0	4	(s)
Zaire .....	353	0	0	0	0	0	0	0	0	0	0	0	353	12
<b>Other Western</b>														
Hemisphere .....	0	0	0	0	276	0	0	0	711	0	0	987	987	33
Other Eastern Hemisphere .....	0	(s)	0	264	504	182	0	0	777	0	(s)	1,727	1,727	58
Subtotal Other .....	9,011	210	685	264	4,193	1,206	0	1,487	11,875	337	963	21,222	30,233	1,008
<b>Total Imports .....</b>	<b>26,536</b>	<b>210</b>	<b>1,150</b>	<b>754</b>	<b>4,193</b>	<b>1,424</b>	<b>500</b>	<b>1,487</b>	<b>18,898</b>	<b>337</b>	<b>1,076</b>	<b>30,028</b>	<b>56,564</b>	<b>1,885</b>
PAD District II														
<b>Arab OPEC</b>														
Saudi Arabia .....	580	0	0	0	0	0	0	0	0	0	0	0	580	19
Subtotal Arab OPEC .....	580	0	0	0	0	0	0	0	0	0	0	0	580	19

See footnotes at end of table.

Table 21. Imports of Crude Oil and Petroleum Products by Source and PAD District, April 1982  
(Thousands of Barrels)

Source	Crude Oil 1	LPG and Ethane	Unfin-ished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kero-sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod-ucts 2	Total Prod-ucts	Total Petro-leum	Total (Daily Average)
PAD District II														
<b>Other OPEC</b>														
Ecuador .....	381	0	0	0	0	0	0	0	0	0	0	0	381	13
Nigeria .....	1,119	0	0	0	0	0	0	0	0	0	0	0	1,119	37
Venezuela .....	0	0	0	0	0	0	0	0	203	0	0	203	203	7
Subtotal Other OPEC .....	1,501	0	0	0	0	0	0	0	203	0	0	203	1,703	57
<b>Other</b>														
Canada .....	4,131	3,530	52	44	2	0	0	1	48	76	26	3,778	7,909	264
France .....	0	0	0	0	0	0	0	0	0	0	(s)	0	(s)	61
Mexico .....	1,831	0	0	0	0	0	0	0	0	0	0	0	1,831	12
Peru .....	361	0	0	0	0	0	0	0	0	0	0	0	361	14
United Kingdom .....	422	0	0	0	0	0	0	0	0	0	0	0	422	33
Other Eastern Hemisphere .....	978	0	0	0	0	0	0	0	0	0	0	0	978	383
Subtotal Other .....	7,723	3,530	52	44	2	0	0	1	48	76	26	3,778	11,500	459
<b>Total Imports .....</b>	<b>9,803</b>	<b>3,530</b>	<b>52</b>	<b>44</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>250</b>	<b>76</b>	<b>26</b>	<b>3,981</b>	<b>13,783</b>	
PAD District III														
<b>Arab OPEC</b>														
Algeria .....	1	0	0	0	0	0	0	0	9	0	0	9	10	(s)
Qatar .....	650	0	0	0	0	0	0	0	0	0	0	0	650	22
Saudi Arabia .....	8,419	0	0	0	0	0	0	0	0	0	0	0	8,419	281
United Arab Emirates .....	3,322	0	0	0	0	0	0	0	0	0	0	0	3,322	111
Subtotal Arab OPEC .....	12,393	0	0	0	0	0	0	0	9	0	0	9	12,402	413
<b>Other OPEC</b>														
Ecuador .....	268	0	0	0	0	0	0	0	0	0	0	0	268	9
Gabon .....	202	0	0	0	0	0	0	0	0	0	0	0	202	7
Indonesia .....	304	0	0	0	0	0	0	0	0	0	0	0	304	10
Nigeria .....	5,449	0	0	0	0	0	0	0	0	0	0	0	5,449	182
Venezuela .....	1,255	0	242	0	0	0	0	0	1,611	120	0	1,973	3,229	108
Subtotal Other OPEC .....	7,478	0	242	0	0	0	0	0	1,611	120	0	1,973	9,451	315
<b>Other</b>														
Bahamas .....	0	0	697	0	0	0	0	0	0	0	0	697	697	23
Congo .....	1	0	0	0	0	0	0	0	0	0	0	0	1	(s)
Egypt .....	1,764	0	0	0	0	0	0	0	0	0	0	0	1,764	59
Mexico .....	9,346	1,125	0	0	(s)	0	90	19	343	0	1	1,577	10,924	364
Netherlands .....	0	0	0	74	0	0	0	0	0	21	0	94	94	3
Netherlands Antilles .....	0	0	0	0	0	0	0	0	478	0	0	478	478	16
Norway .....	388	0	0	0	0	0	0	0	0	0	0	0	388	13
Oman .....	2,550	0	0	0	0	0	0	0	0	0	0	0	2,550	85
Peru .....	0	0	0	0	0	0	0	0	241	0	0	241	241	8
Puerto Rico .....	0	0	0	0	0	0	0	0	0	0	85	85	85	3
Trinidad and Tobago .....	3,545	0	152	0	0	0	0	0	326	0	30	508	4,053	135
Tunisia .....	976	0	0	0	0	0	0	0	0	0	0	0	976	33
United Kingdom .....	2,613	0	0	0	0	0	0	0	0	0	(s)	0	2,613	87
Virgin Islands .....	0	0	0	18	0	0	0	0	0	68	687	773	773	26

See footnotes at end of table.

Table 21. Imports of Crude Oil and Petroleum Products by Source and PAD District, April 1982  
(Thousands of Barrels)  
(continued)

Source	Crude Oil 1	LPG and Ethane	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kerosene	Distill. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Products 2	Total Products	Total Petroleum	Total (Daily Average)
PAD District III														
Other														
Zaire .....	494	0	0	0	0	0	0	0	0	0	0	0	494	16
Other Western Hemisphere .....	272	0	0	13	0	0	0	0	0	19	(s)	32	303	10
Other Eastern Hemisphere .....	705	0	264	0	242	0	0	0	0	23	60	590	1,295	43
Subtotal Other .....	22,653	1,125	1,113	104	242	0	90	19	1,388	130	863	5,075	27,727	924
Total Imports .....	42,523	1,125	1,355	104	242	0	90	19	3,008	250	863	7,057	49,580	1,653
PAD District IV														
Arab OPEC														
United Arab Emirates .....	332	0	0	0	0	0	0	0	0	0	0	0	332	11
Subtotal Arab OPEC .....	332	0	0	0	0	0	0	0	0	0	0	0	332	11
Other														
Canada .....	717	308	0	0	0	0	0	(s)	0	(s)	37	346	1,062	35
Subtotal Other .....	717	308	0	0	0	0	0	(s)	0	(s)	37	346	1,062	35
Total Imports .....	1,049	308	0	0	0	0	0	(s)	0	(s)	37	346	1,394	46
PAD District V														
Other OPEC														
Indonesia .....	3,433	0	0	0	164	0	0	70	84	0	0	317	3,750	125
Subtotal Other OPEC .....	3,433	0	0	0	164	0	0	70	84	0	0	317	3,750	125
Other														
Australia .....	0	38	0	0	0	0	0	0	0	0	0	38	38	1
Brunei .....	0	0	0	0	61	0	0	39	25	0	0	125	125	4
Canada .....	486	420	0	0	0	0	0	40	1	13	(s)	475	961	32
France .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Malaysia .....	548	0	0	0	0	0	0	0	0	0	0	0	548	18
Mexico .....	0	0	0	0	(s)	0	0	30	0	0	0	30	30	1
People's Republic of China .....	0	0	174	0	641	0	0	0	0	160	0	975	975	33
Peru .....	0	0	0	0	0	0	0	34	43	0	0	77	77	3
Other Eastern Hemisphere .....	0	0	0	0	20	0	0	60	554	0	130	763	763	25
Subtotal Other .....	1,034	458	174	0	722	0	0	203	623	173	130	2,483	3,517	117
Total Imports .....	4,467	458	174	0	885	0	0	273	707	173	130	2,800	7,267	242

1 Includes crude oil imported for storage in the Strategic Petroleum Reserve.

2 Includes aviation gasoline, waxes, asphalt, lubricants, natural gasoline, isopentane, plant condensate, naphthas less than 400 degrees F, other oils greater than 400 degrees F and miscellaneous products.

(s) Less than 500 barrels or less than 500 barrels per day.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 22. Exports of Crude Oil and Petroleum Products by PAD District, April 1982  
(Thousands of Barrels)

Commodity	Petroleum Administration for Defense Districts				
	I	II	III	IV	V
Crude Oil (including lease condensate) <sup>1</sup>	0	757	0	0	4,477
Liquefied Petroleum Gases and Ethane					
Ethane	62	765	1,221	0	251
Propane	(s)	0	0	0	0
Butane	27	305	831	0	101
Butane-Propane Mixtures	34	460	389	0	150
Finished Motor Gasoline	0	0	0	0	0
Naphtha-Type Jet Fuel	1	1	865	0	123
Kerosene-Type Jet Fuel	(s)	0	22	0	(s)
Kerosene	(s)	0	0	0	44
Distillate Fuel Oil	(s)	0	20	0	(s)
Residual Fuel Oil	1	0	1,102	0	816
Naphtha < 400 Deg. for Petrochem. Feedstock	(s)	0	3,831	0	3,181
Other Oils > 400 Deg. for Petrochem. Feedstock	61	5	57	1	85
Special Naphthas	(s)	27	415	0	0
Lubricants	4	1	427	0	1
Wax	176	10	272	(s)	54
Petroleum Coke	5	1	5	(s)	3
Asphalt	517	572	1,597	(s)	1,697
Miscellaneous Products	1	1	1	(s)	2
Total Product Exports	16	1	8	(s)	3
	842	1,384	9,842	1	6,261
Total Exports	842	2,141	9,842	1	10,738
					23,565

<sup>1</sup> Exports of crude oil are prohibited under normal circumstances. Some crude oil is shipped to Canada in exchange on a barrel-for-barrel basis. Shipments of crude oil to Puerto Rico and the Virgin Islands are not prohibited because these territories are U.S. possessions.

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 23. Exports of Crude Oil and Petroleum Products by Destination, April 1982  
(Thousands of Barrels)

Destination	Crude Oil 1	LPG and Ethane	Finished Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphthas	Lubri-cants	Wax	Petro-leum Coke	Asphalt	Other	Total	Total (Daily Average)
Argentina	0	(s)	0	0	0	0	(s)	7	(s)	50	(s)	2	59	2
Australia	0	2	0	0	0	0	12	7	(s)	(s)	(s)	5	26	1
Bahamas	0	7	1	(s)	0	1,489	0	2	0	0	0	(s)	1,499	50
Bahrain	0	0	0	0	0	0	(s)	(s)	0	60	0	0	60	2
Belgium & Luxembourg	0	1	0	0	0	0	0	12	(s)	749	0	(s)	763	25
Brazil	0	3	0	0	0	0	(s)	5	0	23	0	1	32	1
Cameroon	0	0	0	0	0	0	0	(s)	0	0	0	0	(s)	(s)
Canada	757	768	1	0	0	491	3	46	3	488	1	45	2,603	87
Chile	0	(s)	0	0	0	0	(s)	1	(s)	0	0	1	2	(s)
China (Taiwan)	0	0	0	0	0	310	0	15	(s)	2	(s)	1	328	11
Colombia	0	3	0	0	(s)	0	0	13	(s)	(s)	0	1	17	1
Costa Rica	0	13	0	0	0	0	(s)	3	(s)	0	0	(s)	1	(s)
Denmark	0	(s)	0	0	0	0	(s)	3	(s)	0	0	1	22	1
Dominican Republic	0	18	0	0	0	0	(s)	3	(s)	0	0	2	4	(s)
Ecuador	0	0	0	0	0	0	0	1	(s)	0	0	1	2	(s)
Egypt	0	0	0	0	0	0	0	2	(s)	0	0	(s)	2	(s)
El Salvador	0	0	0	0	0	0	0	1	(s)	0	0	1	2	(s)
Finland	0	(s)	0	0	0	0	0	1	(s)	0	0	1	1	(s)
France	0	326	0	0	(s)	0	(s)	1	(s)	66	0	178	572	19
French Pacific Isl	0	0	16	0	(s)	0	(s)	1	0	0	0	0	17	1
Ghana	0	3	0	0	(s)	0	0	(s)	0	41	0	(s)	41	1
Greece	0	0	0	0	0	0	0	1	0	0	0	1	4	(s)
Guatemala	0	42	0	0	0	0	(s)	3	0	0	0	21	67	2
Guinea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Honduras	0	0	0	0	0	0	(s)	0	(s)	0	(s)	1	1	(s)
Hong Kong	0	1	0	0	0	202	0	1	(s)	0	0	3	207	7
India	0	0	0	0	0	0	0	(s)	(s)	0	0	(s)	(s)	(s)
Indonesia	0	0	0	0	(s)	0	(s)	14	(s)	0	0	(s)	15	(s)
Iran	0	0	0	0	0	0	0	(s)	0	0	0	(s)	(s)	(s)
Israel	0	0	0	0	0	0	0	1	0	(s)	0	(s)	1	(s)
Italy	0	158	0	0	0	0	(s)	1	0	268	0	193	620	21
Ivory Coast	0	0	0	0	0	0	0	(s)	0	0	0	0	(s)	(s)
Jamaica	0	6	0	0	0	0	0	(s)	0	0	0	1	8	(s)
Japan	0	(s)	0	0	972	23	1	9	2	712	(s)	3	1,724	57
Jordan	0	0	0	0	0	0	0	1	0	0	0	(s)	1	(s)
Korea, Republic of	0	0	0	0	66	369	(s)	2	(s)	(s)	0	(s)	438	15
Kuwait	0	0	0	0	0	0	(s)	1	(s)	0	0	(s)	1	(s)
Lebanon	0	0	0	0	0	0	0	1	(s)	0	0	(s)	1	(s)
Liberia	0	(s)	0	0	0	0	0	1	(s)	0	0	(s)	1	(s)
Malaysia	0	0	0	0	0	0	0	(s)	0	0	0	0	(s)	(s)
Mexico	0	460	399	44	829	0	9	84	(s)	75	2	80	1,914	64
Netherlands	0	35	0	0	0	1,901	5	7	(s)	469	(s)	35	2,453	82
Netherlands Antilles	0	1	0	0	(s)	0	1	1	(s)	0	0	(s)	2	(s)
New Zealand	0	0	0	0	0	0	0	4	0	0	0	1	2	(s)
Nicaragua	0	(s)	0	0	0	0	0	1	(s)	0	0	1	4	(s)
Nigeria	0	0	0	0	0	0	0	0	0	0	(s)	(s)	40	1
Norway	0	0	0	0	0	39	0	1	0	0	0	(s)	109	4
Pacific Trust Terr.	0	1	0	0	0	0	0	0	0	109	0	(s)	1	(s)
Panama	0	0	0	0	0	0	0	(s)	0	0	0	1	66	2
Peru	0	1	0	0	49	0	0	15	0	0	0	(s)	3	(s)
Philippines	0	(s)	0	0	0	383	(s)	8	(s)	1	0	(s)	392	13

See footnotes at end of table.

Table 23. Exports of Crude Oil and Petroleum Products by Destination, April 1982  
(Thousands of Barrels)  
(continued)

Destination	Crude Oil 1	LPG and Ethane	Finished Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphthas	Lubricants	Wax	Petroleum Coke	Asphalt	Other	Total	Total (Daily Average)
Puerto Rico	2,650	163	574	22	0	313	397	10	1	96	(s)	7	4,234	141
Rep. of South Africa	0	(s)	0	0	0	0	0	14	(s)	0	(s)	3	17	1
Saudi Arabia	0	13	0	0	0	0	2	24	0	0	(s)	4	43	1
Singapore	0	(s)	0	0	(s)	240	2	10	0	0	(s)	3	256	9
Spain	0	1	0	0	0	0	0	(s)	(s)	559	0	53	613	20
Surinam	0	0	0	0	0	0	0	0	0	8	0	(s)	8	(s)
Sweden	0	0	0	0	0	0	0	1	(s)	99	0	1	100	3
Switzerland	0	(s)	0	0	0	0	0	1	0	0	0	1	2	(s)
Thailand	0	(s)	0	0	0	518	0	1	0	0	(s)	2	521	17
Trinidad and Tobago	0	0	0	0	0	0	0	1	0	1	0	(s)	2	(s)
Turkey	0	197	0	0	0	0	0	(s)	0	0	0	(s)	197	7
United Arab Emirates	0	(s)	0	0	0	0	0	1	0	60	0	(s)	61	2
United Kingdom	0	2	0	0	1	734	(s)	41	(s)	36	(s)	10	826	28
U.S.R.	0	0	0	0	0	0	0	119	0	272	0	18	409	14
Uruguay	0	0	0	0	0	0	0	1	0	0	0	(s)	1	(s)
Venezuela	0	13	0	0	0	0	(s)	1	(s)	(s)	(s)	2	17	1
Virgin Islands	1,827	0	0	0	0	0	0	(s)	0	0	0	0	1,827	61
West Germany	0	(s)	0	0	0	0	(s)	2	(s)	135	(s)	3	141	5
Yugoslavia	0	0	0	0	0	0	0	(s)	0	0	0	0	(s)	(s)
Other	0	58	0	0	(s)	0	(s)	9	(s)	0	(s)	2	69	2
Total	5,234	2,298	990	66	1,919	7,012	433	513	14	4,382	4	699	23,565	786

1 Exports of crude oil are prohibited under normal circumstances. Some crude oil is shipped to Canada in exchange, on a barrel-for-barrel basis. Shipments of crude oil to Puerto Rico and the Virgin Islands are not prohibited because these territories are U.S. possessions.

(s) Less than 500 barrels or less than 500 barrels per day.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

i. Stocks of Crude Oil and Petroleum Products by PAD District, April 30, 1982  
(Thousands of Barrels)

Commodity	PAD District I		PAD District II					PAD District III				PAD District IV		United States			
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okl., Kans., Mo.	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total		Rocky Mts.	Dist. V West Coast	
<b>Crude Oil (incl. lease condensate)<sup>1</sup></b>																	
Refinery .....	--	--	14,702	--	--	--	--	16,786	--	--	--	--	47,374	2,951	24,958	106,771	
Tank Farms and Pipelines .....	--	--	2,926	--	--	--	--	63,247	--	--	--	--	93,525	11,575	26,209	197,482	
Leases .....	--	--	63	--	--	--	--	1,590	--	--	--	--	17,914	1,460	1,694	22,721	
Strategic Petroleum Reserve <sup>2</sup> .....	--	--	0	--	--	--	--	0	--	--	--	--	255,534	0	0	255,534	
Alaskan In-Transit .....	--	--	0	--	--	--	--	0	--	--	--	--	0	0	28,500	28,500	
Total .....	--	--	17,691	--	--	--	--	81,623	--	--	--	--	414,347	15,986	81,361	611,008	
<b>Petroleum Products</b>																	
Refinery .....	39,353	4,515	43,868	1,015	41,921	8,059	22,233	73,228	10,914	79,620	45,178	5,147	1,415	142,274	16,000	66,867	342,237
Bulk Terminal .....	89,377	5,673	95,050	3,612	34,711	8,227	11,406	57,956	4,055	33,782	6,637	3,632	505	48,611	2,472	20,216	224,305
Pipeline .....	25,228	1,449	26,677	1,222	11,582	3,287	15,873	31,974	8,315	8,952	6,719	13,156	1,344	38,486	2,870	3,907	103,914
Natural Gas Processing Plant .....	329	267	596	0	1,927	145	19,175	21,248	5,016	26,239	9,698	3,794	1,081	45,827	260	458	68,389
Total .....	154,287	11,904	166,191	5,849	90,141	19,728	68,687	184,406	28,300	148,593	68,232	25,729	4,345	275,198	21,602	91,448	738,945
<b>Natural Gasoline and Isopentane</b>																	
Refinery .....	1	0	1	0	31	49	144	224	67	761	197	2	13	1,040	17	49	1,331
Pipeline .....	0	0	0	0	38	0	203	241	230	72	0	48	45	395	157	20	813
Natural Gas Processing Plant .....	1	29	30	0	15	17	1,476	1,508	381	5,324	477	44	92	6,317	42	17	7,914
Total .....	2	29	31	0	84	66	1,823	1,973	678	6,157	674	94	150	7,752	216	86	10,058
<b>Unfractionated Stream</b>																	
Pipeline .....	0	0	0	0	78	0	30	108	0	28	28	0	0	56	0	0	164
Natural Gas Processing Plant .....	0	0	0	0	101	2	1,335	1,438	335	1,597	186	5	123	2,246	34	2	3,720
Total .....	0	0	0	0	179	2	1,365	1,546	335	1,625	214	5	123	2,302	34	2	3,884
<b>Plant Condensate</b>																	
Refinery .....	0	0	0	0	6	0	0	6	10	93	0	84	0	187	0	0	193
Pipeline .....	0	0	0	0	0	0	0	0	860	277	49	5	17	1,208	0	0	1,208
Natural Gas Processing Plant .....	0	0	0	0	2	0	4	5	40	34	12	11	1	98	3	0	106
Total .....	0	0	0	0	8	0	4	11	910	404	61	100	18	1,493	3	0	1,507
<b>Ethane</b>																	
Refinery .....	0	0	0	0	8	0	0	8	0	542	0	0	0	542	0	0	550
Bulk Terminal .....	0	0	0	0	91	0	40	131	0	1,007	0	0	0	1,007	0	0	1,138
Pipeline .....	0	0	0	0	16	1,019	137	1,172	196	79	121	0	3	399	0	0	1,571
Natural Gas Processing Plant .....	0	0	0	0	25	0	550	575	142	1,351	441	1	0	1,935	(s)	(s)	2,510
Total .....	0	0	0	0	140	1,019	727	1,886	338	2,979	562	1	3	3,883	(s)	(s)	5,769
<b>Propane for Petrochemical Feedstock Use</b>																	
Refinery .....	37	0	37	0	64	0	1	65	0	8	385	0	0	393	1	0	496
Total .....	37	0	37	0	64	0	1	65	0	8	385	0	0	393	1	0	496
<b>Propane for Other Uses</b>																	
Refinery .....	365	3	368	1	539	29	223	792	193	525	792	3	4	1,517	71	135	2,883
Bulk Terminal .....	151	0	151	0	695	94	495	1,284	134	14,965	0	33	0	15,132	27	0	16,594
Pipeline .....	876	251	1,127	24	1,516	189	1,746	3,475	539	77	248	598	166	1,628	139	0	6,369
Natural Gas Processing Plant .....	278	234	513	0	1,675	108	12,489	14,271	2,796	5,180	5,369	3,497	314	17,156	143	180	32,263
Total .....	1,670	488	2,159	25	4,425	420	14,953	19,822	3,662	20,747	6,409	4,131	484	35,433	380	315	58,109

Table 24. Stocks of Crude Oil and Petroleum Products by PAD District, April 30, 1982  
(Thousands of Barrels) (continued)

Commodity	PAD District I			PAD District II					PAD District III				PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Daks.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total		Rocky Mt.	Dist. V West Coast
<b>Butane for Petro. Feed. Use</b>																	
Refinery .....	0	0	0	0	0	10	0	10	0	0	20	0	1	0	21	1	35
Total .....	0	0	0	0	0	10	0	10	0	0	20	0	1	0	21	1	35
<b>Butane for Other Uses</b>																	
Refinery .....	118	3	121	58	377	38	312	785	103	528	791	2	2	1,426	122	548	3,002
Bulk Terminal .....	73	0	73	0	195	0	157	352	106	2,782	0	0	0	2,888	0	0	3,313
Pipeline .....	37	69	106	36	921	15	197	1,168	1,020	33	5	126	73	1,257	72	0	2,604
Natural Gas Processing Plant .....	35	2	37	0	100	15	1,316	1,431	590	3,481	2,195	106	87	6,460	32	181	8,142
Total .....	263	74	337	94	1,593	68	1,982	3,737	1,819	6,824	2,991	234	162	12,031	225	729	17,061
<b>Butane-Propane Mixtures for Petro. Feed. Use</b>																	
Refinery .....	0	0	0	0	0	0	0	0	1	0	2	0	0	3	0	0	3
Total .....	0	0	0	0	0	0	0	0	1	0	2	0	0	3	0	0	3
<b>Butane-Propane Mixtures for Other Uses</b>																	
Refinery .....	0	0	0	0	1	0	0	1	0	5	12	1	9	27	4	178	210
Bulk Terminal .....	0	0	0	0	11	0	1	12	0	0	0	0	0	0	0	0	12
Pipeline .....	0	0	0	0	0	0	15	15	612	26	10	0	1	649	0	0	664
Natural Gas Processing Plant .....	0	0	0	0	(S)	0	24	24	50	7	7	(S)	0	64	(S)	3	92
Total .....	0	0	0	0	12	0	40	52	662	38	29	1	10	740	4	181	978
<b>Ethane-Propane Mixtures</b>																	
Refinery .....	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1
Bulk Terminal .....	0	0	0	0	0	0	7	7	430	5,147	0	0	0	5,577	0	0	5,584
Pipeline .....	0	0	0	0	66	0	569	635	1,003	126	2	0	128	1,259	173	0	2,067
Natural Gas Processing Plant .....	0	0	0	0	0	0	1,130	1,130	260	6,762	0	(S)	458	7,480	0	0	8,610
Total .....	0	0	0	0	66	0	1,706	1,772	1,693	12,036	2	(S)	586	14,317	173	0	16,262
<b>Isobutane</b>																	
Refinery .....	4	1	5	45	162	21	156	384	152	219	308	10	2	691	51	30	1,161
Bulk Terminal .....	0	0	0	0	82	0	113	195	20	768	0	0	0	788	0	0	983
Pipeline .....	0	0	0	0	582	1	87	670	98	78	0	50	60	286	45	0	1,001
Natural Gas Processing Plant .....	1	1	2	0	8	4	851	863	140	1,744	1,009	92	5	2,990	1	75	3,930
Total .....	5	2	7	45	834	26	1,207	2,112	410	2,809	1,317	152	67	4,755	97	105	7,075
<b>Other Hydrocarbons and Alcohol</b>																	
Refinery .....	0	7	7	0	114	0	1	115	7	70	12	0	0	89	0	3	214
Total .....	0	7	7	0	114	0	1	115	7	70	12	0	0	89	0	3	214
<b>Unfinished Oils</b>																	
Refinery .....	3,997	567	4,564	38	3,194	124	1,388	4,744	1,234	7,845	5,457	181	134	14,851	592	5,279	30,030
Naphthas and Lighter .....	1,612	42	1,654	0	4,205	4	758	4,967	472	6,423	1,301	40	0	8,236	508	4,018	19,383
Kerosene and Lighter Gas Oils .....	7,745	367	8,112	95	3,936	224	2,941	7,196	1,604	11,809	6,824	377	0	20,614	1,230	12,426	49,578
Heavy Gas Oils .....	1,522	249	1,771	3	3,660	23	1,861	5,547	253	3,995	2,435	36	10	6,729	526	5,385	19,958
Residuum .....	14,876	1,225	16,101	136	14,995	375	6,948	22,454	3,563	30,072	16,017	634	144	50,430	2,856	27,108	118,949
Total .....																	

See footnotes at end of table.



Ta : 29. Stocks of Crude Oil and Petroleum Products by PAD District, April 30, 1982  
(Thousands of Barrels) (continued)

Commodity	PAD District I				PAD District II				PAD District III				PAD			United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okl., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Dist. IV Rocky Mts.		Dist. V West Coast
Motor Gasoline Blending Components																	
Refinery .....	4,319	211	4,530	46	5,623	740	2,565	8,974	1,522	8,799	6,533	99	93	17,046	3,119	7,826	41,495
Bulk Terminal .....	255	2	257	6	203	1	252	462	116	419	0	1	0	536	0	179	1,434
Pipeline .....	0	0	0	0	29	2	237	268	67	0	0	0	0	67	0	0	335
Total .....	4,574	213	4,787	52	5,855	743	3,054	9,704	1,705	9,218	6,533	100	93	17,649	3,119	8,005	43,264
Aviation Gasoline Blending Components																	
Refinery .....	0	0	0	0	164	0	17	181	37	108	36	0	0	181	0	177	539
Total .....	0	0	0	0	164	0	17	181	37	108	36	0	0	181	0	177	539
Total Finished Motor Gasoline																	
Refinery .....	5,796	402	6,198	74	5,653	2,015	3,743	11,485	2,251	10,002	4,664	957	174	18,048	2,685	7,241	45,657
Bulk Terminal .....	32,789	2,695	35,484	1,949	16,810	3,634	5,055	27,448	1,903	3,571	1,464	2,336	350	9,624	1,632	8,552	82,740
Pipeline .....	14,491	773	15,264	731	5,759	1,189	6,906	14,585	1,682	4,959	3,729	7,404	281	18,055	1,510	1,746	51,160
Natural Gas Processing Plant .....	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Total Finished Motor Gasoline .....	53,090	3,870	56,960	2,754	28,222	6,838	15,704	53,518	5,836	18,532	9,857	10,697	805	45,727	5,830	17,539	179,574
Finished Leaded Motor Gasoline																	
Refinery .....	2,616	230	2,846	36	3,118	933	1,928	6,017	1,192	4,843	2,417	822	131	9,405	1,785	3,277	23,330
Bulk Terminal .....	15,061	1,351	16,412	961	8,255	2,098	2,833	14,147	975	2,135	701	1,080	232	5,123	999	4,507	41,188
Pipeline .....	7,354	322	7,676	392	2,892	720	3,752	7,756	739	2,507	1,984	3,523	152	8,905	1,002	767	26,106
Natural Gas Processing Plant .....	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Total .....	25,045	1,903	26,948	1,391	14,265	3,751	8,513	27,920	2,906	9,485	5,102	5,425	515	23,433	3,788	8,551	90,640
Finished Unleaded Motor Gasoline																	
Refinery .....	3,180	172	3,352	36	2,535	1,082	1,815	5,468	1,059	5,159	2,247	135	43	8,643	898	3,958	22,319
Bulk Terminal .....	17,712	1,344	19,056	988	8,529	1,536	2,220	13,273	928	1,436	763	1,256	118	4,501	633	4,045	41,508
Pipeline .....	7,137	451	7,588	339	2,867	468	3,154	6,828	926	2,452	1,745	3,881	129	9,133	508	979	25,036
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total .....	28,029	1,967	29,996	1,363	13,931	3,086	7,189	25,569	2,913	9,047	4,755	5,272	290	22,277	2,040	8,982	88,864
Gasohol																	
Refinery .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	8
Bulk Terminal .....	16	0	16	0	26	0	2	28	0	0	0	0	0	0	0	0	44
Pipeline .....	0	0	0	0	0	1	0	1	17	0	0	0	0	17	0	0	18
Total .....	16	0	16	0	26	1	2	29	17	0	0	0	0	17	2	6	70
Finished Aviation Gasoline																	
Refinery .....	23	0	23	0	142	0	67	209	22	298	177	0	0	497	48	169	946
Bulk Terminal .....	398	39	437	1	201	51	64	317	63	33	6	35	42	179	11	402	1,346
Pipeline .....	5	0	5	0	0	0	30	30	0	1	0	0	0	1	0	0	36
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	94	0	0	0	0	94	0	0	94
Total .....	426	39	465	1	343	51	161	556	179	332	183	35	42	771	59	571	2,422
Naphtha-Type Jet Fuel																	
Refinery .....	234	56	290	0	210	29	562	801	227	787	564	153	232	1,963	169	936	4,159
Bulk Terminal .....	25	0	25	3	32	47	139	221	134	4	0	48	0	186	18	88	538
Pipeline .....	312	0	312	3	1	83	103	190	101	0	1	129	338	569	123	467	1,661
Total .....	571	56	627	6	243	159	804	1,212	462	791	565	330	570	2,718	310	1,491	6,358

See footnotes at end of table.

Commodity	PAD District I				PAD District II				PAD District III				PAD			United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	PAD		
															Dist. IV Rocky Mt.		Dist. V West Coast
<b>Kerosene-Type Jet Fuel</b>																	
Refinery .....	1,114	11	1,125	55	1,167	89	300	1,611	331	3,144	2,526	10	23	6,034	345	4,051	13,166
Bulk Terminal .....	4,855	179	5,034	65	2,043	432	925	3,465	236	1,515	65	35	30	1,881	144	2,489	13,013
Pipeline .....	3,344	98	3,442	94	913	133	1,902	3,042	1,059	1,152	757	1,399	66	4,433	122	567	11,606
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	2
Total .....	9,313	288	9,601	214	4,123	654	3,127	8,118	1,628	5,811	3,348	1,444	119	12,350	611	7,107	37,787
<b>Kerosene</b>																	
Refinery .....	206	105	311	0	604	29	264	897	40	1,309	446	6	57	1,858	27	94	3,187
Bulk Terminal .....	2,748	248	2,996	191	837	55	11	1,094	9	563	57	23	0	652	29	48	4,819
Pipeline .....	537	24	561	100	96	0	298	494	6	122	325	60	0	513	0	15	1,583
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	2	0	0	(s)	1	3	0	0	3
Total .....	3,491	377	3,868	291	1,537	84	573	2,485	57	1,994	828	89	58	3,026	56	157	9,592
<b>Total Distillate Fuel Oils</b>																	
Refinery .....	3,647	510	4,157	54	4,404	1,440	3,482	9,380	1,017	8,510	4,430	1,041	338	15,336	2,003	5,311	36,187
Bulk Terminal .....	23,268	1,834	25,102	916	9,299	2,640	3,114	15,969	888	1,986	1,329	921	78	5,202	610	4,750	51,633
Pipeline .....	5,624	221	5,845	221	1,545	666	3,409	5,841	823	1,921	1,444	3,337	166	7,691	529	1,076	20,982
Natural Gas Processing Plant .....	0	0	0	0	0	0	(s)	(s)	1	0	(s)	0	0	1	0	0	1
Total Distillate Fuel Oil .....	32,539	2,565	35,104	1,191	15,248	4,746	10,005	31,190	2,729	12,417	7,203	5,299	582	28,230	3,142	11,137	108,803
<b>Dist. Fuel Oils Less No. 4 Fuel Oil</b>																	
Refinery .....	3,647	500	4,147	54	4,385	1,440	3,482	9,361	954	8,210	4,270	970	259	14,663	1,993	5,265	35,429
Bulk Terminal .....	22,077	1,834	23,911	896	9,226	2,639	3,114	15,875	888	1,980	1,329	920	78	5,195	610	4,733	50,324
Pipeline .....	5,624	221	5,845	221	1,545	666	3,409	5,841	823	1,921	1,444	3,337	166	7,691	529	1,076	20,982
Natural Gas Processing Plant .....	0	0	0	0	0	0	(s)	(s)	1	0	(s)	0	0	1	0	0	1
Total .....	31,348	2,555	33,903	1,171	15,156	4,745	10,005	31,077	2,666	12,111	7,043	5,227	503	27,550	3,132	11,074	106,736
<b>No. 4 Fuel Oil</b>																	
Refinery .....	0	10	10	0	19	0	0	19	63	300	160	71	79	673	10	46	758
Bulk Terminal .....	1,191	0	1,191	20	73	1	0	94	0	6	0	1	0	7	0	17	1,309
Total .....	1,191	10	1,201	20	92	1	0	113	63	306	160	72	79	680	10	63	2,067
<b>Residual Fuel Oils</b>																	
Refinery .....	3,084	200	3,284	85	2,299	400	507	3,291	316	4,863	3,574	310	54	9,117	523	7,530	23,745
Bulk Terminal .....	20,185	39	20,224	176	1,878	172	680	2,906	7	994	3,338	38	0	4,377	0	2,355	29,862
Pipeline .....	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	16	17
Total .....	23,269	239	23,508	261	4,177	572	1,187	6,197	323	5,858	6,912	348	54	13,495	523	9,901	53,624
<b>Naphtha &lt; 400 Deg. Petro. Feedstock</b>																	
Refinery .....	147	0	147	0	90	0	60	150	85	1,674	458	10	0	2,227	0	210	2,734
Total .....	147	0	147	0	90	0	60	150	85	1,674	458	10	0	2,227	0	210	2,734
<b>Other Oils &gt; 400 Deg. Petro. Feedstock</b>																	
Refinery .....	2	103	105	0	205	0	1	206	108	582	273	26	0	989	0	157	1,457
Total .....	2	103	105	0	205	0	1	206	108	582	273	26	0	989	0	157	1,457

See footnotes at end of table.

Table 24. Stocks of Crude Oil and Petroleum Products, PAD District, April 30, 1982  
(Thousands of Barrels) (continued)

Commodity	PAD District I				PAD District II				PAD District III				PAD		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total		Dist. IV Rocky Mt.	Dist. V West Coast
<b>Special Naphthas</b>																	
Refinery .....	20	40	60	1	148	0	197	346	34	1,150	80	148	0	1,412	4	252	2,074
Bulk Terminal .....	1,000	8	1,008	75	160	22	39	296	0	0	0	8	0	1,366	0	54	1,366
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	129	0	0	0	0	129	0	0	129
Total .....	1,020	48	1,068	76	308	22	236	642	163	1,150	80	156	0	1,549	4	306	3,569
<b>Lubricants</b>																	
Refinery .....	143	459	602	0	56	0	69	125	0	268	64	0	0	332	6	55	1,120
Bright Stock .....	695	335	1,030	0	614	0	426	1,040	0	1,728	849	70	0	2,647	86	599	5,402
Neutral .....	784	169	953	0	180	0	120	300	37	2,140	298	131	0	2,606	8	109	3,976
Other .....	1,084	231	1,315	14	441	20	72	547	9	28	200	85	5	327	1	665	2,855
Bulk Terminals .....	2,706	1,194	3,900	14	1,291	20	687	2,012	46	4,164	1,411	286	5	5,912	101	1,428	13,353
Total .....																	
<b>Wax, Microcrystalline</b>																	
Refinery .....	0	45	45	0	0	0	15	15	26	23	8	0	0	57	0	0	117
Total .....	0	45	45	0	0	0	15	15	26	23	8	0	0	57	0	0	117
<b>Wax, Crystalline—Fully Refined</b>																	
Refinery .....	12	26	38	0	27	0	23	50	0	55	125	0	0	180	9	35	312
Total .....	12	26	38	0	27	0	23	50	0	55	125	0	0	180	9	35	312
<b>Wax, Crystalline—Other</b>																	
Refinery .....	4	64	68	0	3	0	7	10	0	133	0	0	0	133	0	24	235
Total .....	4	64	68	0	3	0	7	10	0	133	0	0	0	133	0	24	235
<b>Petroleum Coke</b>																	
Refinery .....	1,077	0	1,077	0	428	389	197	1,014	2	121	530	75	0	728	540	1,434	4,793
Total .....	1,077	0	1,077	0	428	389	197	1,014	2	121	530	75	0	728	540	1,434	4,793
<b>Asphalt</b>																	
Refinery .....	2,304	500	2,804	459	3,522	2,387	1,790	8,158	707	669	753	1,311	270	3,710	3,301	2,288	20,261
Bulk Terminal .....	2,469	398	2,867	216	1,714	1,055	241	3,226	0	0	166	51	0	217	0	516	6,826
Total .....	4,773	898	5,671	675	5,236	3,442	2,031	11,384	707	669	919	1,362	270	3,927	3,301	2,804	27,087
<b>Road Oil</b>																	
Refinery .....	0	0	0	0	16	0	6	22	0	0	0	2	0	2	4	26	54
Total .....	0	0	0	0	16	0	6	22	0	0	0	2	0	2	4	26	54
<b>Miscellaneous Products</b>																	
Refinery .....	341	40	381	1	69	19	30	119	56	413	274	61	0	804	0	289	1,593
Bulk Terminal .....	77	0	77	0	19	4	1	24	0	0	12	18	0	30	0	118	249
Pipeline .....	2	13	15	13	22	0	4	39	19	0	0	0	0	19	0	0	73
Natural Gas Processing Plant .....	0	0	0	0	2	0	(s)	2	56	758	(s)	36	(s)	852	1	0	855
Total .....	420	53	473	14	112	23	35	184	131	1,171	286	115	(s)	1,705	1	407	2,770
<b>Total Stocks, All Oils</b>	--	--	183,882	--	--	--	--	266,029	--	--	--	--	--	689,545	37,588	172,809	1,349,853

1 Crude oil data are not collected by refinery district.

2 Includes 33726 thousands of barrels of domestic crude oil.

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

— Not Applicable.

Table 25. Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts, April 1982  
(Thousands of Barrels)

Commodity	From I to			From II to			From III to			From IV to			From V to		
	II	III	I	I	III	IV	I	II	IV	V	II	III	V	I	III
<b>Crude Oil</b>	0	0	0	140	0	0	581	1,265	0	0	0	0	0	2,592	18,785
<b>Petroleum Products</b>	7,266	230	2,855	5,167	2,045	78,404	16,932	19	2,863	928	0	1,080	42	0	0
Natural Gasoline and Isopentane	0	0	0	292	0	0	1,049	0	0	0	0	0	0	0	0
Unfractionated Stream	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plant Condensate	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Liquefied Petroleum Gases	7	0	760	1,618	91	1,054	5,515	0	0	0	0	0	0	0	0
Unfinished Oils	7	0	0	0	0	1,074	48	0	0	0	0	0	0	0	0
Motor Gasoline Blending Components	0	0	0	0	0	0	853	0	0	0	0	0	0	0	0
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline	5,337	0	1,353	1,369	1,090	46,274	4,630	0	1,224	438	0	691	0	0	0
Finished Leaded Motor Gasoline	2,947	0	576	793	602	21,384	2,156	0	426	302	0	465	0	0	0
Finished Unleaded Motor Gasoline	2,390	0	777	576	481	24,890	2,467	0	798	136	0	226	0	0	0
Gasohol	0	0	0	0	7	0	7	0	0	0	0	0	0	0	0
Finished Aviation Gasoline	15	0	0	0	5	279	43	0	0	0	0	0	0	0	0
Naphtha-Type Jet Fuel	60	0	0	79	0	767	0	0	175	20	0	83	0	0	0
Kerosene-Type Jet Fuel	89	0	86	23	618	7,630	1,946	0	171	0	0	132	0	0	0
Kerosene	53	0	10	0	0	456	48	0	0	0	0	0	0	0	0
Distillate Fuel Oil	1,652	0	253	496	241	15,304	1,828	0	283	178	0	174	0	0	0
Distillate Fuel Oil Less No. 4	1,652	0	253	453	241	15,199	1,828	0	283	178	0	174	0	0	0
No. 4 Fuel Oil	0	0	0	43	0	105	0	0	0	0	0	0	0	0	0
Residual Fuel Oil	0	0	148	864	0	3,899	229	0	506	0	0	0	11	0	0
Naphtha and Other Oils for Petro.															
Feedstock	21	145	17	0	0	23	93	0	30	0	0	0	0	0	0
Special Naphthas	0	0	0	0	0	312	154	0	0	0	0	0	0	0	0
Lubricants	25	77	27	0	0	894	292	19	236	0	0	0	0	0	0
Wax	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
Asphalt and Road Oil	0	0	0	426	0	261	153	0	238	0	0	0	0	0	0
Miscellaneous Products	0	8	201	0	0	172	50	0	0	0	0	0	31	0	0
<b>Total All Products</b>	7,266	230	2,995	5,167	2,045	78,985	18,197	19	2,863	928	0	1,080	2,634	18,785	0

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 26. Movements of Petroleum Products by Pipeline Between PAD Districts, April 1982  
(Thousands of Barrels)

Commodity	From I to	From II to				From III to				From IV to			
	II	I	III	IV	I	II	III	IV	V	II	III	V	
Natural Gasoline and Isopentane	0	0	0	292	0	0	0	1,049	0	0	292	0	
Unfractionated Stream	0	0	0	0	0	0	0	0	0	0	0	0	
Plant Condensate	0	0	0	0	0	0	1	0	0	0	0	0	
Liquefied Petroleum Gases	0	760	1,618	91	894	5,443	0	0	0	0	0	0	
Motor Gasoline Blending Components	0	0	0	0	0	853	0	0	0	0	0	0	
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0	0	
Finished Motor Gasoline	4,349	1,119	1,369	1,090	35,853	4,054	0	0	0	0	0	0	
Finished Leaded Motor Gasoline	2,341	468	793	602	16,378	1,803	0	0	805	438	0	691	
Finished Unleaded Motor Gasoline	2,008	651	576	481	19,475	2,244	0	0	426	302	0	465	
Gasohol	0	0	0	7	0	0	0	7	379	136	0	226	
Finished Aviation Gasoline	15	0	0	5	37	18	0	0	0	0	0	0	
Naphtha-Type Jet Fuel	0	0	79	0	251	0	0	0	175	20	0	83	
Kerosene-Type Jet Fuel	80	63	23	618	5,124	1,561	0	0	171	0	0	132	
Kerosene	6	10	0	0	345	48	0	0	0	0	0	0	
Distillate Fuel Oil	1,279	182	453	241	11,627	1,281	0	0	283	178	0	174	
Distillate Fuel Oil Less No. 4	1,279	182	453	241	11,627	1,281	0	0	283	178	0	174	
No. 4 Fuel Oil	0	0	0	0	0	0	0	0	0	0	0	0	
Residual Fuel Oil	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous Products	0	0	0	0	0	0	0	0	0	0	0	0	
Total	5,729	2,335	3,834	2,045	54,131	14,341	0	0	1,434	928	0	1,080	

Note: Total may not equal sum of components due to independent rounding.  
Source: See Explanatory Notes on Data Collection and Estimation.

Table 27. Movements of Crude Oil and Petroleum Products by Tanker and Barge Between PAD Districts, April 1982  
(Thousands of Barrels)

Commodity	From I to			From II to			From III to					From V to		
	II	III	I	I	III	I	New Eng	Cent Atl	Low Atl	II	IV	V	I	III
Crude Oil	0	0	0	140	0	581	0	581	0	1,265	0	0	2,592	18,795
Petroleum Products	1,537	230	520	0	1,333	24,273	1,489	4,703	18,081	2,591	0	1,429	42	0
Liquefied Petroleum Gases	7	0	0	0	0	160	0	0	160	72	0	0	0	0
Unfinished Oils	7	0	0	0	0	1,074	0	1,047	27	48	0	0	0	0
Finished Motor Gasoline	988	0	234	0	0	10,421	215	143	10,063	576	0	419	0	0
Finished Aviation Gasoline	0	0	0	0	0	242	27	66	149	25	0	0	0	0
Naphtha-Type Jet Fuel	60	0	0	0	0	516	11	0	505	0	0	0	0	0
Kerosene-Type Jet Fuel	9	0	23	0	0	2,506	413	246	1,847	385	0	0	0	0
Kerosene	47	0	0	0	0	111	20	79	12	0	0	0	0	0
Distillate Fuel Oil	373	0	71	0	43	3,677	418	920	2,339	547	0	0	0	0
Residual Fuel Oil	0	0	148	0	864	3,899	380	1,223	2,296	229	0	506	11	0
Naphtha and Other Oils for Petro. Feed Use	21	145	17	0	0	23	0	13	10	93	0	30	0	0
Special Naphthas	0	0	0	0	0	312	0	175	137	154	0	0	0	0
Lubricants	25	77	27	0	0	894	5	615	274	292	19	236	0	0
Wax	0	0	0	0	0	5	0	5	0	0	0	0	0	0
Asphalt and Road Oil	0	0	0	0	426	261	0	23	238	153	0	238	0	0
Miscellaneous Products	0	8	0	0	0	172	0	148	24	17	0	0	31	0
Total	1,537	230	660	1,333	24,854	1,489	5,284	18,081	3,856	19	1,429	2,592	2,592	18,785

Note: Total may not equal sum of components due to independent rounding.  
Source: See Explanatory Notes on Data Collection and Estimation.

Table 28. Net Movements of Crude Oil and Petroleum Products by Pipeline, Tanker and Barge Between PAD Districts, April 1982  
(Thousands of Barrels)

Commodity	P.A.D. District I			P.A.D. District II			P.A.D. District III			P.A.D. District IV			P.A.D. District V		
	Receipts into PADD I	Shipments from PADD I	Net Receipts PADD I	Receipts into PADD II	Shipments from PADD II	Net Receipts PADD II	Receipts into PADD III	Shipments from PADD III	Net Receipts PADD III	Receipts into PADD IV	Shipments from PADD IV	Net Receipts PADD IV	Receipts into PADD V	Shipments from PADD V	Net Receipts PADD V
<b>Crude Oil</b>	3,313	0	3,313	1,265	140	1,125	18,785	1,846	16,939	0	0	0	0	21,377	-21,377
<b>Petroleum Products</b>	81,301	7,496	73,805	25,126	10,067	15,059	5,397	98,218	-92,821	2,064	2,008	56	3,943	42	3,901
Natural Gasoline	0	0	0	1,341	292	1,049	292	1,049	-757	0	292	-292	0	0	0
Unfractionated Stream	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plant Condensate	0	0	0	1	0	1	0	1	-1	0	0	0	0	0	0
Liquefied Petroleum Gases	1,814	7	1,807	5,522	2,469	3,053	1,618	6,569	-4,951	91	0	91	0	0	0
Unfinished Oils	1,074	7	1,067	55	0	55	1,122	1,122	-1,122	0	0	0	0	0	0
Motor Gasoline Blending Components	0	0	0	853	0	853	0	853	-853	0	0	0	0	0	0
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline	47,627	5,337	42,290	10,405	3,812	6,593	1,369	52,128	-50,759	1,090	1,129	-39	1,915	0	1,915
Finished Leaded Motor Gasoline	21,960	2,947	19,013	5,405	1,971	3,434	793	23,966	-23,173	602	767	-165	891	0	891
Finished Unleaded Motor Gasoline	25,667	2,390	23,277	4,993	1,834	3,159	576	28,155	-27,579	481	362	119	1,024	0	1,024
Gasohol	0	0	0	7	7	0	0	7	-7	0	0	0	0	0	0
Finished Aviation Gasoline	279	15	264	58	5	53	0	322	-322	5	5	5	0	0	0
Naphtha-Type Jet Fuel	767	60	707	80	79	1	79	942	-863	0	103	-103	258	0	258
Kerosene-Type Jet Fuel	7,716	89	7,627	2,035	727	1,308	23	9,747	-9,724	618	132	486	303	0	303
Kerosene	466	53	413	101	10	91	0	504	-504	0	0	0	0	0	0
Distillate Fuel Oil	15,557	1,652	13,905	3,658	990	2,668	496	17,415	-16,919	241	352	-111	457	0	457
Distillate Fuel Oil Less No. 4	15,452	1,652	13,800	3,658	947	2,711	453	17,310	-16,857	241	352	-111	457	0	457
No. 4 Fuel Oil	105	0	105	0	43	-43	43	105	-62	0	0	0	0	0	0
Residual Fuel Oil	4,058	0	4,058	229	1,012	-783	864	4,634	-3,770	0	0	0	506	11	495
Naphtha and Other Oils for Petro.															
Feedstock Use	40	166	-126	114	17	97	145	146	-1	0	0	0	30	0	30
Special Naphthas	312	0	312	154	0	154	0	466	-466	0	0	0	0	0	0
Lubricants	921	102	819	317	27	290	77	1,441	-1,364	19	0	19	236	0	236
Wax	5	0	5	0	0	0	0	5	-5	0	0	0	0	0	0
Asphalt and Road Oil	261	0	261	153	426	-273	426	652	-226	0	0	0	238	0	238
Miscellaneous Products	404	8	396	50	201	-151	8	222	-214	0	0	0	0	31	-31
<b>Total All Products</b>	84,614	7,496	77,118	26,391	10,207	16,184	24,182	100,064	-75,882	2,064	2,008	56	3,943	21,419	-17,476

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 29. Production of No.4 Fuel Oil and Residual Fuel Oil By Sulfur Content, April 1982  
(Thousands of Barrels)

Commodity	PAD District I			PAD District II				PAD District III				PAD District IV		PAD District V		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.		West Coast	
No. 4 Fuel Oil	0	10	10	0	9	0	0	0	9	10	387	-111	58	187	531	28	61	639
0.00 to 0.30% Sulfur	0	2	2	0	0	0	0	0	0	0	310	47	0	0	357	0	0	359
0.31 to 0.50% Sulfur	0	0	0	0	2	0	0	2	4	4	0	0	0	0	4	28	0	34
0.51 to 1.00% Sulfur	0	0	0	0	7	0	0	7	5	77	0	0	2	187	271	0	26	304
1.01 to 2.00% Sulfur	0	8	8	0	0	0	0	0	1	0	0	0	0	0	1	0	4	13
Greater Than 2.00% Sulfur	0	0	0	0	0	0	0	0	0	0	-158	56	0	0	-102	0	31	-71
Residual Fuel Oil	4,544	129	4,673	95	2,242	267	709	3,313	777	6,973	6,832	395	104	15,081	340	11,455	34,862	
0.00 to 0.30% Sulfur	509	25	534	0	0	0	0	0	79	381	27	101	44	632	28	216	1,410	
0.31 to 0.50% Sulfur	1,598	51	1,649	0	37	0	111	148	98	149	30	101	0	378	116	1,239	3,530	
0.51 to 1.00% Sulfur	919	0	919	95	1,095	0	386	1,576	481	1,572	961	114	5	3,133	63	1,389	7,080	
1.01 to 2.00% Sulfur	86	53	139	0	703	102	114	919	114	555	772	18	55	1,514	28	8,134	10,734	
Greater Than 2.00% Sulfur	1,432	0	1,432	0	407	165	98	670	5	4,316	5,042	61	0	9,424	105	477	12,108	

Note: Total may not equal sum of components due to independent rounding.  
Source: See Explanatory Notes on Data Collection and Estimation.

Table 30. Stocks of No.4 Fuel Oil and Residual Fuel Oil By Sulfur Content, April 1982  
(Thousands of Barrels)

Commodity	PAD District I			PAD District II					PAD District III				PAD			United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	PAD			
														Rocky Mt.	Dist. V West Coast		
<b>No. 4 Fuel Oil – 0.00 to 0.30% Sulfur</b>																	
Refinery .....	0	6	6	0	0	0	0	0	0	65	7	0	137	0	0	143	
Bulk Terminal .....	494	0	494	0	0	0	0	0	0	6	1	0	7	0	0	501	
Total .....	494	6	500	0	0	0	0	0	0	71	8	0	144	0	0	644	
<b>No.4 Fuel Oil – 0.31 to 0.50% Sulfur</b>																	
Refinery .....	0	0	0	0	5	0	0	12	0	0	1	0	13	8	18	44	
Bulk Terminal .....	68	0	68	0	0	0	0	0	0	0	0	0	0	0	0	68	
Total .....	68	0	68	0	5	0	0	12	0	0	1	0	13	8	18	112	
<b>No. 4 Fuel Oil – 0.51 to 1.00% Sulfur</b>																	
Refinery .....	0	0	0	0	14	0	0	14	32	235	0	5	79	351	0	385	
Bulk Terminal .....	198	0	198	0	8	1	0	9	0	0	0	0	0	0	0	207	
Total .....	198	0	198	0	22	1	0	23	32	235	0	5	79	351	0	592	
<b>No. 4 Fuel Oil – 1.01 to 2.00% Sulfur</b>																	
Refinery .....	0	4	4	0	0	0	0	0	19	0	35	0	54	2	5	65	
Bulk Terminal .....	381	0	381	0	0	0	0	0	0	0	0	0	0	0	17	398	
Total .....	381	4	385	0	0	0	0	19	0	35	0	0	54	2	22	463	
<b>No.4 Fuel Oil – Greater Than 2.00% Sulfur</b>																	
Refinery .....	0	0	0	0	0	0	0	0	0	0	59	59	118	0	3	121	
Bulk Terminal .....	50	0	50	20	65	0	0	85	0	0	0	0	0	0	0	135	
Total .....	50	0	50	20	65	0	0	85	0	0	59	59	118	0	3	256	
<b>Residual Fuel Oil – 0.00 to 0.30% Sulfur</b>																	
Refinery .....	409	33	442	0	0	0	0	115	212	21	25	7	380	136	544	1,502	
Bulk Terminal .....	3,195	0	3,195	0	4	0	0	4	10	1,348	2	0	1,360	0	0	4,559	
Total .....	3,604	33	3,637	0	4	0	0	115	222	1,369	27	7	1,740	136	544	6,061	
<b>Residual Fuel Oil – 0.31 to 0.50% Sulfur</b>																	
Refinery .....	953	28	981	0	111	3	3	117	57	308	11	107	483	37	1,444	3,062	
Bulk Terminal .....	1,387	0	1,387	0	75	0	0	75	0	49	0	0	49	0	44	1,555	
Total .....	2,340	28	2,368	0	186	3	3	192	57	357	11	107	532	37	1,488	4,617	
<b>Residual Fuel Oil – 0.51 to 1.00% Sulfur</b>																	
Refinery .....	675	0	675	85	1,139	0	200	1,424	104	1,223	951	109	5	2,392	16	610	5,117
Bulk Terminal .....	4,953	21	4,974	121	1,035	19	93	1,268	7	314	227	0	0	548	0	289	7,079
Total .....	5,628	21	5,649	206	2,174	19	293	2,692	111	1,537	1,178	109	5	2,940	16	899	12,196
<b>Residual Fuel Oil – 1.01 to 2.00% Sulfur</b>																	
Refinery .....	474	139	613	0	526	174	140	840	33	622	536	10	42	1,243	170	4,569	7,435
Bulk Terminal .....	2,755	14	2,769	55	510	102	458	1,125	0	136	117	0	0	253	0	1,508	5,655
Total .....	3,229	153	3,382	55	1,036	276	598	1,965	33	758	653	10	42	1,496	170	6,077	13,090
<b>Residual Fuel Oil – Greater than 2.00% Sulfur</b>																	
Refinery .....	573	0	573	0	523	223	164	910	7	2,498	2,055	59	0	4,619	164	363	6,829
Bulk Terminal .....	7,895	4	7,899	0	254	51	129	434	0	485	1,846	36	0	2,167	0	514	11,014
Total .....	8,468	4	8,472	0	777	274	293	1,344	7	2,983	3,701	95	0	6,786	164	877	17,643
<b>Residual Fuel Oil – Sulfur Content Not Specified</b>																	
Pipeline .....	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	16	17
Total .....	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	16	17

Note: Total may not equal sum of components due to independent rounding.  
Sources: See Explanatory Notes on Data Collection and Estimation.



Table 31. Imports of Residual Fuel Oil by Sulfur Content by Country of Origin, April 1982  
(Thousands of Barrels)

Country	Residual Fuel Oil						Total
	0.00 to 0.30%	0.31 to 0.50%	0.51 to 1.00%	1.01 to 2.00%	Greater Than 2.00%	Not Specified	
<b>Arab OPEC</b>							
Algeria .....	1,909	138	0	0	0	0	2,047
Iraq .....	0	0	0	0	0	0	0
Kuwait .....	0	0	0	0	0	0	0
Qatar .....	0	0	0	0	0	0	0
Saudi Arabia .....	0	0	0	0	0	0	0
United Arab Emirates .....	0	0	0	0	0	0	0
Subtotal Arab OPEC .....	1,909	138	0	0	0	0	2,047
<b>Other OPEC</b>							
Ecuador .....	0	0	0	311	0	0	311
Gabon .....	0	0	0	0	0	0	0
Indonesia .....	0	84	0	0	0	0	84
Iran .....	0	0	0	0	0	0	0
Nigeria .....	0	0	0	0	0	0	0
Venezuela .....	123	0	0	248	6,118	0	6,488
Subtotal Other OPEC .....	123	84	0	558	6,118	0	6,882
<b>Other</b>							
Angola .....	0	0	0	0	0	0	0
Australia .....	253	0	0	0	0	0	253
Bahamas .....	717	0	100	0	405	0	1,223
Bolivia .....	0	0	0	0	0	0	0
Brazil .....	366	0	0	0	0	0	366
Brunei .....	0	21	0	4	0	0	25
Canada .....	0	0	225	103	4	0	332
Mexico .....	0	0	0	0	343	0	343
Netherlands .....	0	0	0	0	(s)	0	(s)
Netherlands Antilles .....	843	0	0	129	3,920	0	4,892
Norway .....	0	0	0	0	0	0	0
Oman .....	0	0	0	0	0	0	0
People's Republic of China .....	0	0	0	0	0	0	0
Peru .....	0	43	241	0	0	0	284
Puerto Rico .....	0	0	0	0	0	0	0
Romania .....	0	0	0	0	0	0	0
Spain .....	0	0	0	0	0	0	0
Syria .....	0	0	0	0	0	0	0
Trinidad .....	0	0	465	0	326	0	792
Tunisia .....	0	0	0	0	0	0	0
United Kingdom .....	0	0	0	0	0	0	0
Virgin Islands .....	281	179	1,641	711	571	0	3,382
Yugoslavia .....	0	0	0	0	0	0	0
Zaire .....	0	0	0	0	0	0	0
<b>Other Western</b>							
Hemisphere .....	358	0	0	0	353	0	711
Other Eastern Hemisphere .....	464	465	399	0	4	0	1,332
Subtotal Other .....	3,282	707	3,071	947	5,926	0	13,934
<b>Total Imports</b> .....	5,314	929	3,071	1,505	12,044	0	22,863

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 32. Imports of Residual Fuel Oil by Sulfur Content by State of Entry, April 1982  
(Thousands of Barrels)

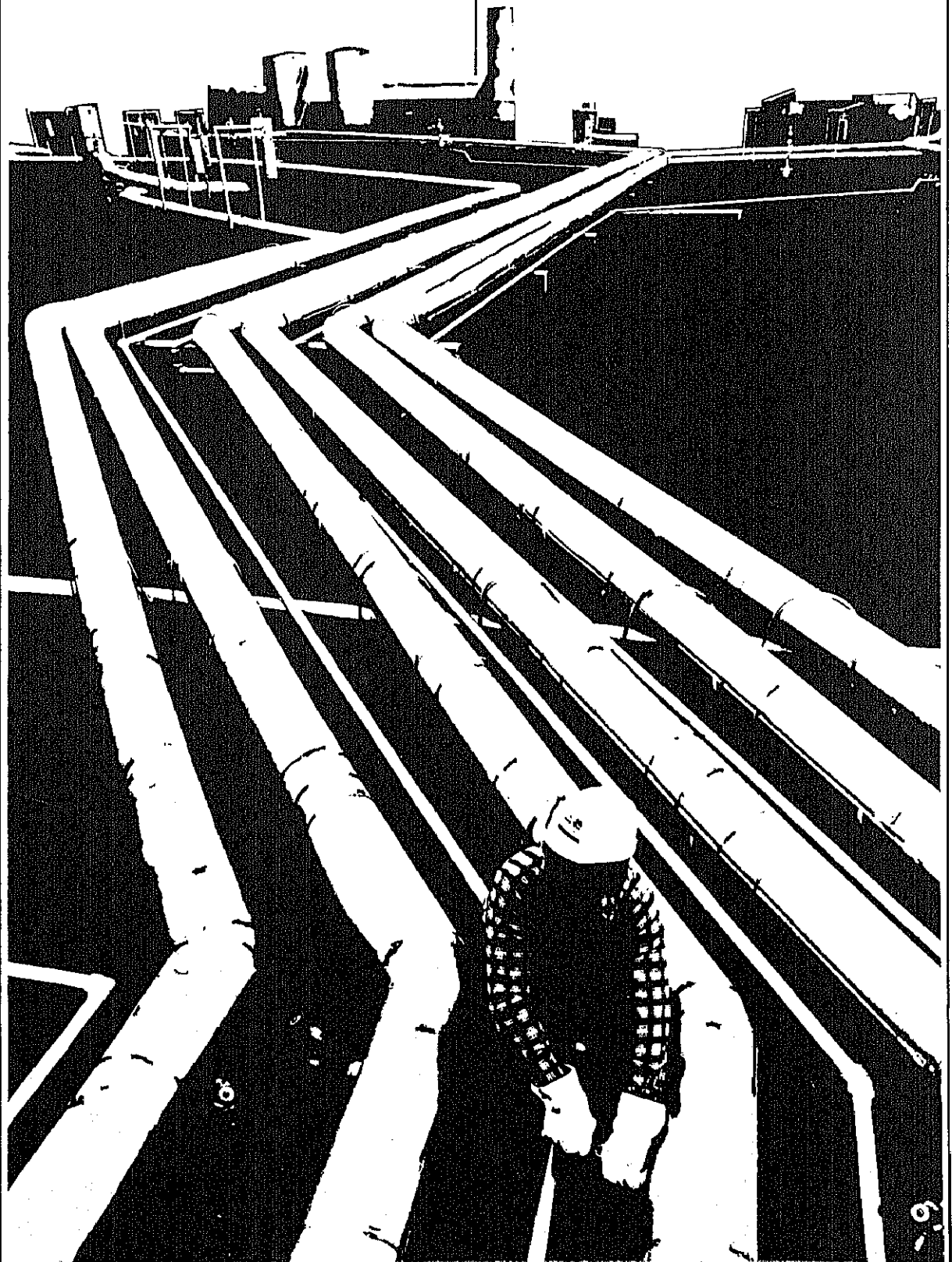
State	Residual Fuel Oil						Total
	0.00 to 0.30%	0.31 to 0.50%	0.51 to 1.00%	1.01 to 2.00%	Greater Than 2.00%	Not Specified	
<b>PAD District I</b> .....	4,840	691	2,798	1,489	9,080	0	18,898
Connecticut .....	0	0	329	0	0	0	329
Florida .....	0	0	755	197	1,538	0	2,490
Georgia .....	0	0	0	0	126	0	126
Maine .....	0	0	192	35	1,010	0	1,237
Maryland .....	0	0	160	100	311	0	571
Massachusetts .....	0	0	136	0	1,286	0	1,422
New Jersey .....	1,016	76	199	124	1,392	0	2,807
New York .....	3,702	512	618	741	1,147	0	6,720
Pennsylvania .....	0	103	408	0	531	0	1,043
Rhode Island .....	0	0	0	0	50	0	50
South Carolina .....	73	0	0	79	282	0	433
Virginia .....	48	0	0	213	1,408	0	1,669
<b>PAD District II</b> .....	0	0	31	13	207	0	250
Michigan .....	0	0	31	0	0	0	31
North Dakota .....	0	0	0	13	207	0	219
<b>PAD District III</b> .....	10	0	241	0	2,757	0	3,008
Louisiana .....	1	0	241	0	2,301	0	2,543
Texas .....	9	0	0	0	456	0	465
<b>PAD District IV</b> .....	0	0	0	0	0	0	0
<b>PAD District V</b> .....	464	238	1	4	0	0	707
California .....	464	0	0	0	0	0	464
Hawaii .....	0	238	0	4	0	0	242
Washington .....	0	0	1	0	0	0	1
<b>All PAD Districts</b> .....	5,314	929	3,071	1,505	12,044	0	22,863

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.



# Glossary



# Glossary

## Definitions of Petroleum Products and Other Terms

**Alcohol.** The family name of a group of organic chemical compounds composed of carbon, hydrogen and oxygen. The series of molecules vary in chain length and are composed of a hydrocarbon plus hydroxyl group,  $\text{CH}-(\text{CH})_n-\text{OH}$ . "Alcohol" includes ethanol and methanol.

**Asphalt.** A dark-brown-to-black cement-like material, containing bitumens as the predominant constituents, obtained by petroleum processing. The definition includes crude asphalt as well as following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts. The conversion factor is 42-gallon barrels per short ton.

**ASTM.** The acronym for the American Society for Testing and Materials.

**Aviation Gasoline Blending Components.** Finished components in the gasoline range which will be used for blending or compounding into finished aviation gasoline.

**Aviation Gasoline (Finished).** All special grades of gasoline for use in aviation reciprocating engines as given in ASTM Specification D 910 and Military Specification MIL-G-5572.

**Barrel.** A volumetric unit of measure for crude oil and petroleum products equivalent to 42 U.S. gallons. This measure is used in most statistical reports. Factors for converting petroleum coke, asphalt and wax to barrels are given in the definitions for these products.

**Butane.** A normally gaseous paraffinic hydrocarbon,  $\text{C}_4\text{H}_{10}$ . It is extracted from natural gas or refinery gas streams. Butane is covered by ASTM Specification D1835 and Gas Processors Association Specification for commercial butane.

- **Normal Butane**—A saturated straight-chain hydrocarbon of butane. It is a colorless paraffinic gas that boils at a temperature of  $31.1^\circ\text{F}$ . This classification includes mixtures of gases that contain 80 percent or more normal butane.
- **Other Butanes**—All butanes not included as normal butane or isobutane.

**Butane-Propane Mixtures.** Mixtures consisting exclusively of butane and propane that conform to ASTM Specification D1835 and Gas Processors Association Specification for commercial butane-propane. They are extracted from natural gas and refinery gas streams.

**Butylene.** An olefinic hydrocarbon,  $\text{C}_4\text{H}_8$ , recovered from refinery processes. It is reported in the "Butane" category.

**Coal.** A generic term applied to carbonaceous rocks that were formed by the partial or complete decomposition of vegetation. These stratified carbonaceous rocks are either solid or brittle and are highly combustible. Includes lignite, bituminous coal, and anthracite which conform to ASTM Specification D 388.

**Crude Oil (including Lease Condensate).** A mixture of hydrocarbons that existed in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Lease condensate is included. Drips are also included, but topped crude (residual) oil and other unfinished oils are excluded. Liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded where identifiable. Crude oil is considered as either domestic or foreign, according to the following:

- **Domestic**—Crude oil produced in the United States or from its outer continental shelf as defined in 43 U.S.C. 1331. Hydrocarbons such as shale oil and tar sand oil are included.
- **Foreign**—Crude oil produced outside the United States. Imported Athabasca hydrocarbons are included.

**Distillate Fuel Oil.** A general classification for one of the petroleum fractions produced in conventional distillation operations. It is used primarily for space heating, on- and off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation. Included are products known as No. 1 and No. 2 heating oils, No. 1 and No. 2 diesel fuel oils, and No. 4 fuel oil.

- **No. 1 Fuel Oil**—A light distillate fuel oil intended for vaporizing pot-type burners. ASTM Specification D 396 specifies for this grade maximum distillation temperatures of 400° F. at the 10-percent point and 550° F. at the 90-percent point, and kinematic viscosities between 1.4 and 2.2 centistokes at 100° F.

- **No. 2 Fuel Oil**—A distillate fuel oil for domestic heating for use in atomizing-type burners or for moderate capacity commercial-industrial burner units. ASTM Specification D 396 specifies for this grade temperatures at the 90-percent point between 540° and 640° F., and kinematic viscosities between 2.0 and 3.6 centistokes at 100° F.

- **No. 1 and No. 2 Diesel Fuel Oils**—Distillate fuel oils used in compression-ignition engines, as given by ASTM Specification D 975:

1. **No. 1-D**—A volatile distillate fuel oil in the 400° to 550° F. boiling range for engines in service requiring frequent speed and load changes. Type C-B diesel fuel, which is used for city buses and similar operations, is included.

2. **No. 2-D**—A distillate fuel oil of lower volatility in the 540° to 640° F. boiling range for engines in industrial and heavy mobile service. Type R-R diesel fuel for railroad compression-ignition engines and Type T-T for diesel-engine trucks are included.

- **No. 4 Fuel Oil**—A fuel oil for commercial burner installations not equipped with preheating facilities. It is used extensively in industrial plants. This grade is a blend of distillate fuel oil and residual fuel oil stocks that conforms to ASTM Specification D 396 or Federal Specification VV-F-815C; its kinematic viscosity is between 5.8 and 26.4 centistokes at 100° F. Also included is No. 4-D, a fuel oil for low- and medium-speed diesel engines that conforms to ASTM Specification D 975.

**Eastern Hemisphere.** That half of the earth east of the Atlantic Ocean which includes Europe, Asia, Africa, and Australia. The Hawaiian Foreign Trade Zone is in this hemisphere.

**Electric Energy (Purchased).** Electricity purchased for refinery operations that is not produced within the refinery complex.

**Ethane.** A normally gaseous paraffinic hydrocarbon,  $C_2H_6$ , extracted from natural gas and refinery gas streams. "Ethane" includes any product containing 90 percent liquid volume or more ethane.

**Ethane-Propane Mixtures.** Mixtures of ethane and propane in which neither component is 90 percent or more of the liquid volume. It is extracted from natural gas and refinery gas streams.

**Ethylene.** An olefinic hydrocarbon,  $C_2H_4$ , recovered from refinery and petrochemical processes. It is reported in the "Ethane" category.

**Field Production.** Represents crude oil production on leases, natural gas liquids production at natural gas processing plants, and new supply of other hydrocarbons and alcohol.

**Gas Well Gas.** Natural gas produced from gas wells. Such gas may be either associated gas or non-associated gas.

- **Associated Gas**—Free natural gas in immediate contact, but not in solution, with crude oil in the reservoir.

- **Non-Associated Gas**—Free natural gas not in contact with, nor dissolved in, crude oil in the reservoir.

**Imported Crude Oil Burned as Fuel.** The amount of foreign crude oil burned as a fuel oil, usually as residual fuel oil, without being processed as such. "Imported crude oil burned as fuel" includes lease condensate and liquid hydrocarbons produced from tar sand oil, gilsonite, and oil shale.

**Isobutane.** A saturated branch-chain isomer of butane. It is a colorless paraffinic gas that boils at a temperature of 10.9° F. This classification includes mixtures of gases that contain 80 percent liquid volume or more isobutane. It is extracted from natural gas and refinery gas streams.

**Isopentane.** A saturated branch-chain hydrocarbon, C<sub>5</sub>H<sub>12</sub>, obtained by fractionation of natural gasoline or isomerization of normal pentane.

**Kerosene.** A petroleum distillate that boils at a temperature between 300° and 550° F., that has a flash point higher than 100° F. by ASTM Method D 56, that has a gravity range from 40° to 46° API, and that has a burning point in the range of 150° to 175° F. It is a clean-burning product suitable for use as an illuminant when burned in wick lamps. Includes grades of kerosene called range oil having properties similar to No. 1 fuel oil, but with a gravity of about 43° API and having a maximum end-point of 625° F. Kerosene is used in space heaters, cook stoves, and water heaters.

**Kerosene-Type Jet Fuel.** A quality kerosene product with an average gravity of 40.7° API, a 10-percent distillation temperature of 400° F., and an end-point of 572° F. It is covered by ASTM Specification D 1655 and Military Specification MIL-T-5624L (Grade JP-5 and JP-8). It is used primarily for commercial turbojet and turboprop aircraft engines.

**Lease Condensate.** A natural gas liquid recovered from gas well gas (associated and non-associated) in lease separators or natural gas field facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons.

**Lease Separator.** A surface facility used for separating casinghead gas from produced crude oil and water and separating gas from that portion of associated gas and non-associated gas that liquefies at the temperature and pressure conditions of the separator.

**Liquefied Petroleum Gases (LPG).** Propane, propylene, butanes, butylene, ethane-propane mixtures, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate raw natural gas plant liquids. Formerly called "Liquefied Gases."

**Liquefied Refinery Gases (LRG).** Liquefied petroleum gases fractionated from refinery or still gases. Through compression and/or refrigeration they are retained in the liquid state. The reported categories are ethane and/or ethylene, propane and/or propylene, butane and/or butylene, butane-propane mixtures, and isobutane. Excludes still gases used for chemical or rubber manufacture which are reported as petrochemical feedstocks and also excludes liquefied gases ready for blending into gasoline which are reported as gasoline blending components. Liquefied refinery gases are reported for use as petrochemical feedstocks, other uses, or both.

**Lubricants.** A substance used to reduce friction between bearing surfaces. Petroleum lubricants may be produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. "Lubricants" includes all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. The three categories reported are:

- **Bright Stock**—A refined, high viscosity lubricating oil base stock that is usually made from a residuum by a treatment such as deasphalting, acid treatment, or solvent extraction.
- **Neutral**—A distillate lubricating oil base stock with a viscosity that is usually not above 550 Saybolt Universal Seconds (SUS) at 100° F. It is prepared by a treatment such as hydrofining, acid treatment, or solvent extraction.
- **Other**—A lubricating oil base stock used in finished lubricating oils and greases, including black, coastal, and red oils.

**Miscellaneous Products.** Includes all finished products not classified elsewhere. "Miscellaneous products" include petrolatum, absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, and other finished products.

**Motor Gasoline Blending Components.** Finished components in the gasoline range that will be used for blending or compounding into finished motor gasoline. Pool gasoline is included in this category.

**Motor Gasoline (Finished).** A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark-ignition

engines. Specifications for motor gasoline, as given in ASTM Specification D 439 or Federal Specification VV-G-1690B, include a boiling range of 122° to 158° F. at the 10-percent point to 365° to 374° F. at the 90-percent point and a Reid vapor pressure range from 9 to 15 psi. "Motor gasoline" includes finished leaded gasoline, finished unleaded gasoline, and gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

- **Finished Leaded Gasoline**—Contains more than 0.05 grams of lead per gallon or more than 0.005 grams of phosphorus per gallon. The actual lead content of any given gallon, however, may vary as a function of the size of the producer and company according to specific Environmental Protection Agency waiver provisions. Premium and regular grades are included, depending on the octane rating.
- **Finished Unleaded Gasoline**—Contains up to 0.05 grams of lead per gallon and 0.005 grams of phosphorus per gallon. Premium and regular grades are included, depending on the octane rating.
- **Gasohol**—A blend of alcohol and finished motor gasoline that is no more than 90 percent of finished motor gasoline (leaded or unleaded as described above) and no less than 10 percent or more alcohol (ethanol or methanol).

**Motor Gasoline (Total).** Includes finished leaded motor gasoline, finished unleaded motor gasoline, motor gasoline blending components, and gasohol.

**Naphtha-Type Jet Fuel.** A fuel in the heavy naphtha boiling range with an average gravity of 52.8° API and 20 to 90 percent distillation temperatures of 290° to 470° F., meeting Military Specification MIL-T-5624L (Grade JP-4). JP-4 is used for turbojet and turboprop aircraft engines, primarily by the military. This category excludes ram-jet and petroleum rocket fuels, which are included in the "Miscellaneous Products" category.

**Natural Gas.** A mixture of hydrocarbons and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in underground reservoirs.

**Natural Gas Field Facility.** A field facility designed to process natural gas produced from more than one lease for the purpose of recovering condensate from a stream of natural gas; however, some field facilities are designed to recover propane, butane, natural gasoline, etc., and to control the quality of natural gas to be marketed.

**Natural Gas Plant Liquids.** Natural gas liquids recovered from natural gas in gas processing plants, and in some situations, from natural gas field facilities. Natural gas liquids extracted by fractionators are also included. These liquids are defined according to the published specifications of the Gas Processors Association and the American Society for Testing and Materials, and are classified as follows: Ethane, propane, ethane-propane mix, isobutane, butane, butane-propane mix, isopentane, natural gasoline, plant condensate, unfractionated stream, and other products from natural gas processing plants (i.e., products meeting the standards of finished petroleum products produced at natural gas processing plants, such as finished motor gasoline, finished aviation gasoline, special naphthas, kerosene, distillate fuel oil, and miscellaneous products).

**Natural Gas Processing Plant.** A facility designed to recover natural gas liquids from a stream of natural gas that may or may not have been processed through lease separators or natural gas field facilities. The facility also controls the quality of natural gas to be marketed. Cycling plants are classified as gas processing plants.

**Natural Gasoline.** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas, that meets vapor pressure, end-point, and other specifications for natural gasoline set by the Gas Producers Association.

**OPEC.** The acronym for the Organization of Petroleum Exporting Countries, oil-producing and-exporting countries that have organized for the purpose of negotiating with oil companies on matters of oil production, prices, and future concession rights. Current members are Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

**Operable Distillation Capacity.** The maximum amount of input that can be processed by a crude oil distillation unit in a 24-hour period, making allowances for processing limitations due to types and



grades of inputs, limitations of downstream facilities, scheduled and unscheduled downtimes, and environmental constraints. Includes any shutdown capacity that could be placed in operation within 90 days.

**Other Hydrocarbons.** Materials received by a refinery and consumed as raw materials. Includes hydrogen, coal, tar derivatives, gilsonite, and natural gas received by the refinery for reforming into hydrogen. Natural gas to be used as fuel is excluded.

**Petrochemical Feedstocks.** Chemical feedstocks derived from petroleum, principally for the manufacture of synthetic rubber and a variety of plastics. The categories reported are "Naphtha-less than 400° F. end-point" and "Other oils over 400° F. end-point."

- **Naphtha less than 400° F. end-point**—A naphtha with an end point of less than 400° F. and that is reported as used as a petrochemical feedstock.
- **Other oils over 400° F. end-point**—Oils with an end point over 400° F. and that are reported as used as a petrochemical feedstock.

**Petroleum Coke.** A residue, the final product of the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion factor is 5.42-gallon barrels per short ton.

- **Marketable Coke**—Those grades of coke that are produced in delayed or fluid cokers and which may be recovered as relatively pure carbon. This "green" coke may be sold or further purified by calcining.
- **Catalyst Coke**—In many catalytic operations (i.e., catalytic cracking) carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon which is used as fuel in the refinery process. This carbon or coke is not recoverable in a concentrated form.

**Petroleum Products.** Petroleum products are obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, natural gasoline and isopentane, plant condensate, unfractionated stream, ethane liquefied petroleum gases, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, naphtha less than 400° F. end-point, other oils-over 400° F. end-point, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

**Petroleum Refinery.** An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas plant liquids, other hydrocarbons, and alcohol.

**Plant Condensate.** One of the natural gas plant liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquids at gas inlet separators or scrubbers in processing plants.

**Primary Stocks.** Stocks of crude oil or petroleum products held in storage at (or in) leases, refineries, natural gas processing plants, pipelines, tankfarms, and bulk terminals that can store at least 50,000 barrels of petroleum products or that can receive petroleum products by tanker, barge, or pipeline. Crude oil that is in transit from Alaska, or that is stored on Federal leases or in the Strategic Petroleum Reserve is included. "Primary Stocks" excludes stocks of foreign origin that are held in bonded warehouse storage.

**Propane.** A normally gaseous hydrocarbon,  $C_3H_8$ , extracted from natural gas and refinery gasstreams. It is used primarily as a fuel and as a petrochemical feedstock. Propane is covered by ASTM Specification D1835, Gas Processors Association for commercial and HD-5 propane, and ASTM Specification for special duty propane.

**Propylene.** An olefinic hydrocarbon,  $C_3H_6$ , recovered from refinery and petrochemical processes. It is reported in the "Propane" category.

**Residual Fuel Oil.** Topped crude of refinery operations. "Residual Fuel Oil" includes No. 5 and No. 6 fuel oils as defined in ASTM Specification D 396 and Federal Specification VV-F-815C; Navy Special fuel oil as defined in Military Specification MIL-F-859E including Amendment 2; Bunker C fuel oil. Residual fuel oil is used for the production of electric power, space heating, vessel bunkering, and various industrial purposes. Imports of residual fuel oil include "Imported Crude Oil Burned as Fuel."

**Road Oil.** Any heavy petroleum oil, including residual asphaltic oils, used as a dust palliative and surface treatment of roads and highways. It is generally produced in six grades; from 0, the most liquid, to 5, the most viscous.

**Special Naphthas.** All finished products within the gasoline range that are used as paint thinners, cleaners, and solvents. These products are refined to a specified flash point and have a boiling range of 90° to 220° F. "Special naphthas" includes all commercial hexane and cleaning solvents conforming to ASTM Specifications D1836 and D 484, respectively. Naphthas to be blended or marketed as motor gasoline or aviation gasoline or that are to be used as petrochemical and synthetic natural gas (SNG) feedstocks are excluded.

**Steam (Purchased).** Steam that is purchased for use by a refinery that was not generated from within the refinery complex.

**Still Gas (Refinery Gas).** Any form or mixture of gas produced in refineries by distillation, cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, butane, butylene, propane, propylene, etc. Still gas is reported for petrochemical feedstock use and refinery fuel use.

- **Petrochemical Feedstock Use**—Includes all refinery streams which are used by chemical or rubber manufacturing operations for further processing, less the amount of such streams returned to the source refinery. Finished petrochemical products are not included. For example, polyethylene, butadiene, etc. are considered petrochemical products; therefore, only their feedstock equivalents are included.

- **Fuel Use**—All other still gas.

**Strategic Petroleum Reserve (SPR).** Stocks (currently, only crude oil) maintained by the Federal Government for use during periods of major supply interruption.

**Unfinished Oils.** Includes all oils requiring further processing, except those requiring only mechanical blending.

**Unfractionated Stream.** Mixtures of unsegregated natural gas plant liquid components excluding those included in plant condensate. This product is extracted from natural gas.

**Wax.** A solid or semi-solid material derived from petroleum distillates or residues by such treatments as chilling, precipitating with a solvent, or de-oiling. It is a light-colored, more-or-less translucent crystalline mass, slightly greasy to the touch, consisting of a mixture of solid hydrocarbons in which the paraffin series predominates. Includes all marketable wax whether crude scale or fully refined. The three grades reported are microcrystalline, crystalline—fully refined, and crystalline—other. The conversion factor is 280 pounds per 42-gallon barrel.

- **Microcrystalline Wax**—Wax extracted from certain petroleum residues having a finer and less apparent crystalline structure than paraffin wax and having the following physical characteristics:

- Penetration at 77° F. (D-1321)—60 maximum.

- Viscosity at 210° F. in Saybolt Universal Seconds (SUS)

- (D-88)—60 SUS (10.22 centistokes) minimum to 150

- SUS (31.8 centistokes) maximum.

- Oil content (D-721)—5 percent minimum.

- **Crystalline-Fully Refined Wax**—A light-colored paraffin wax having the following characteristics:

- Viscosity at 210° F.

- (D-88)—59.9 SUS (10.18 centistokes) maximum.

- Oil Content (D-721)—0.5 percent maximum.

- Other +20 color, Saybolt minimum.

- **Crystalline-Other Wax**—A paraffin wax having the following characteristics:

- Viscosity at 210° F. (D-88)—59.9 SUS (10.18 centistokes) maximum.

- Oil Content (D-721)—0.51 percent minimum to 15 percent maximum.

**Western Hemisphere.** That half of the earth that includes North and South America and the surrounding waters.

# Bureau of Mines Petroleum Refining Districts and PAD Districts

## PAD District

## Refining District

I

**East Coast**—District of Columbia and the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, and the following counties of the State of New York: Cayuga, Tompkins, Chemung and all counties east and north thereof. Also the following counties in the State of Pennsylvania: Bradford, Sullivan, Columbia, Montour, Northumberland, Dauphin, York, and all counties east thereof.

**Appalachian #1**—The State of West Virginia, those parts of the States of Pennsylvania and New York not included in the East Coast District.

**Appalachian #2**—The following counties of the State of Ohio: Erie, Huron, Crawford, Marion, Delaware, Franklin, Pickaway, Ross, Pike, Scioto, and all counties east thereof.

II

**Indiana—Illinois—Kentucky**—The States of Indiana, Illinois, Kentucky, Tennessee, Michigan, and that part of the State of Ohio not included in the Appalachian District.

**Minnesota—Wisconsin—North and South Dakota**—The States of Minnesota, Wisconsin, North Dakota, and South Dakota.

**Oklahoma—Kansas—Missouri**—The States of Oklahoma, Kansas, Missouri, Nebraska, and Iowa.

**Texas Inland**—The State of Texas except the Texas Gulf Coast District.

**Texas Gulf Coast**—The following counties of the State of Texas: Newton, Orange, Jefferson, Jasper, Tyler, Hardin, Liberty, Chambers, Polk, San Jacinto, Montgomery, Harris, Galveston, Waller, Fort Bend, Brazoria, Wharton, Matagorda, Jackson, Victoria, Calhoun, Refugio, Aransas, San Patricio, Nueces, Kleberg, Kenedy, Willacy, and Cameron.

III

**Louisiana Gulf Coast**—The following Parishes of the State of Louisiana: Vernon, Rapides, Avoyelles, Pointe Coupee, West Feliciana, East Feliciana, Saint Helena, Tangipahoa, Washington, and all Parishes south thereof. Also the following counties of the State of Mississippi: Pearl River, Stone, George, Hancock, Harrison, and Jackson. Also the following counties of the State of Alabama: Mobile and Baldwin.

**North Louisiana—Arkansas**—The State of Arkansas and those parts of the States of Louisiana, Mississippi, and Alabama not included in the Louisiana Gulf Coast District.

**New Mexico**—The State of New Mexico.

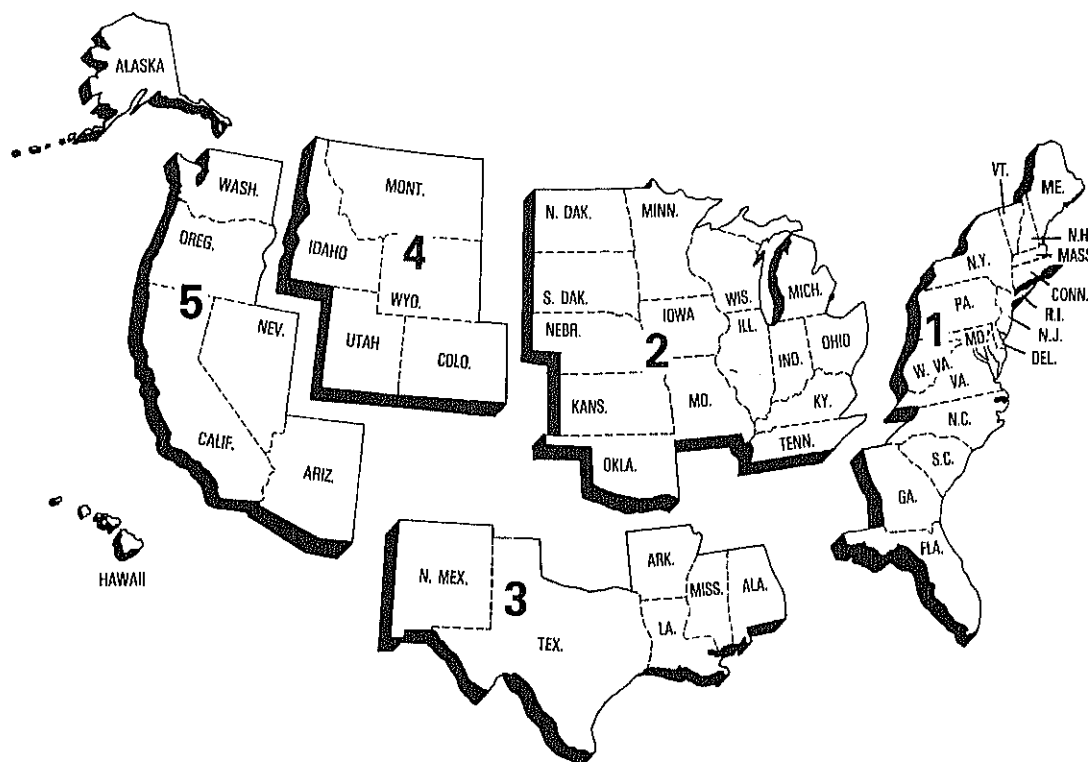
IV

**Rocky Mountain**—The States of Montana, Idaho, Wyoming, Utah, and Colorado.

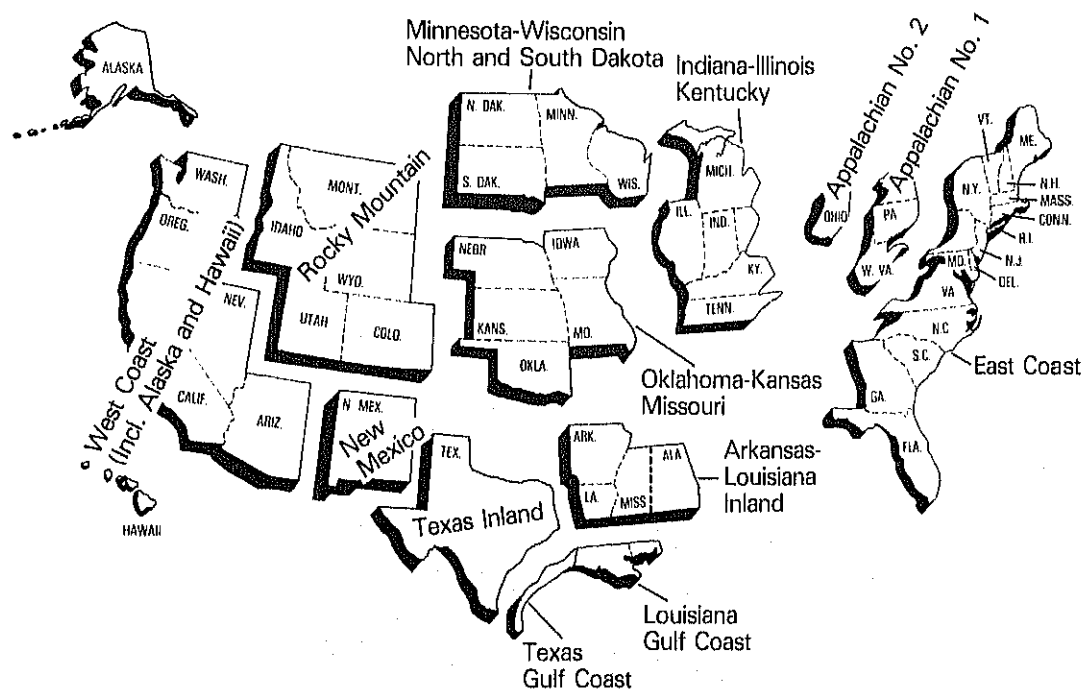
V

**West Coast**—The States of Washington, Oregon, California, Nevada, Arizona, Alaska, and Hawaii.

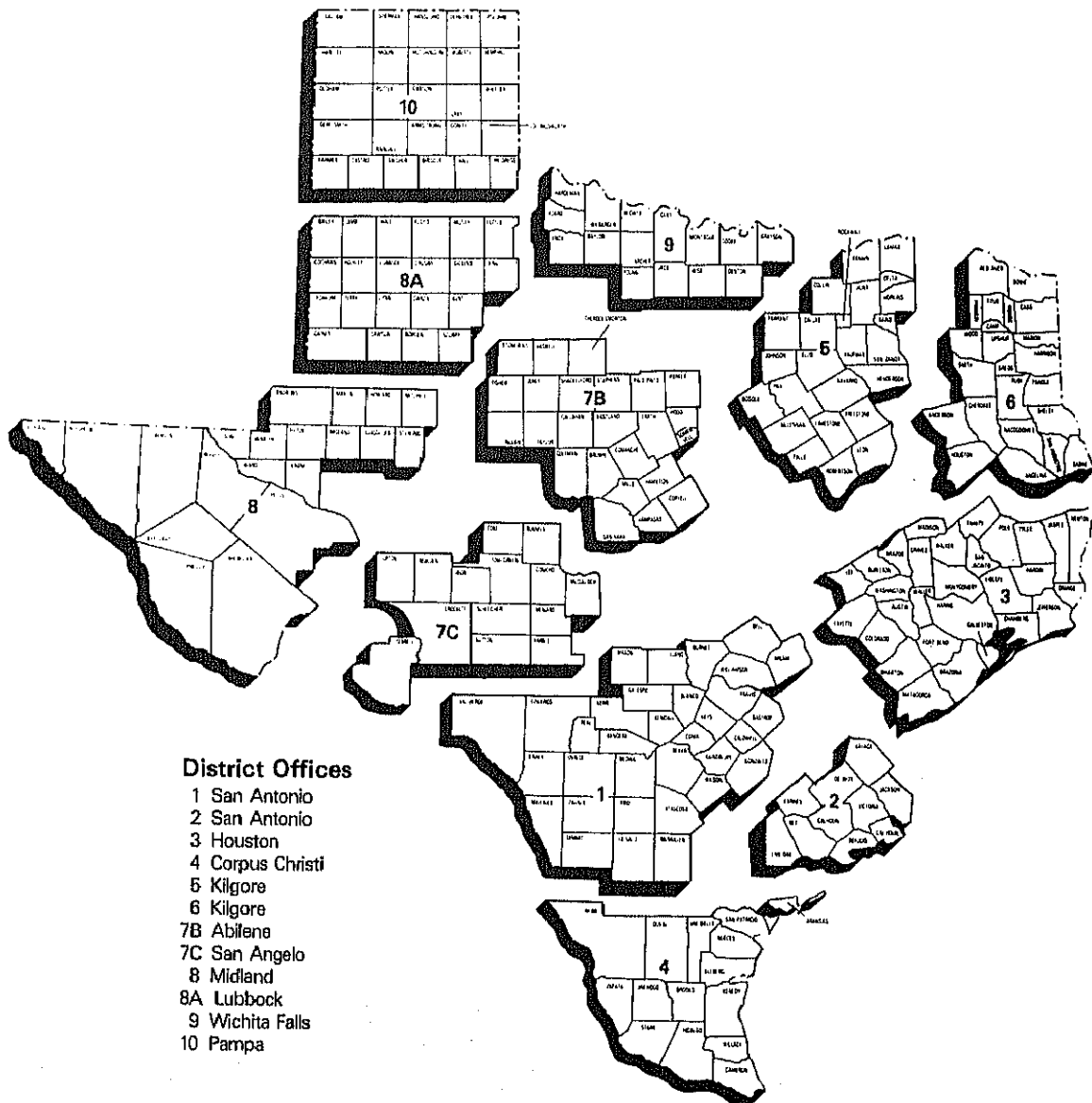
## Petroleum Administration for Defense (PAD) Districts



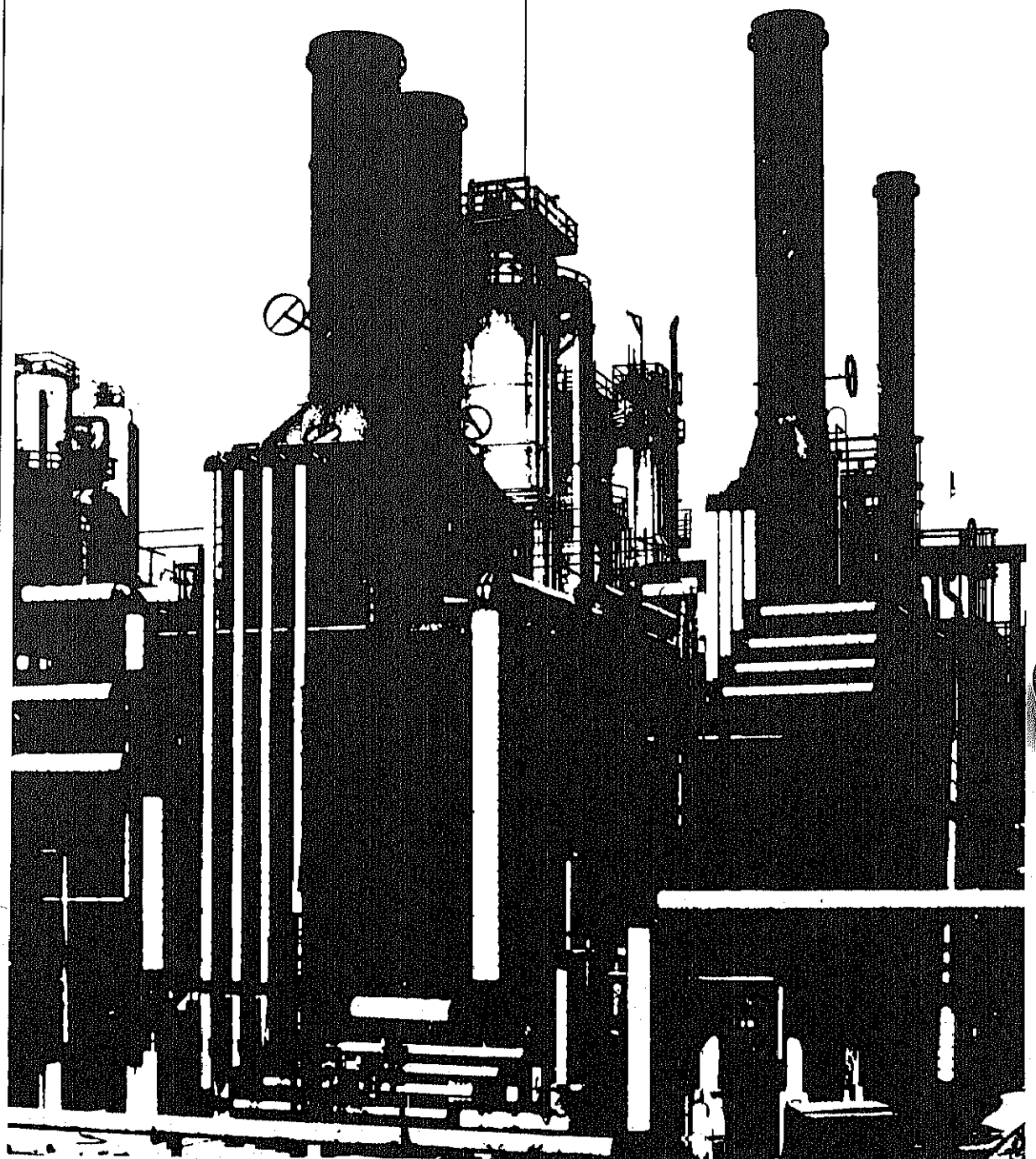
## Bureau of Mines Refining Districts



## District Map Oil and Gas Division Railroad Commission of Texas



# Explanatory Notes



# Explanatory Notes

## Note 1.1 EIA-64: Natural Gas Liquids Operations Report

### Background

The EIA-64, "Natural Gas Liquids Operations Report" evolved from a survey designed and conducted by the United States Geological Survey beginning in 1911. This form collects data on the production and storage of natural gas plant liquids at natural gas processing plants and fractionators.

### Description of Survey

#### Universe

The universe includes all operators of facilities designed to: (1) extract liquid hydrocarbons from natural gas streams (natural gas processing plants); (2) separate a combined products liquid hydrocarbon stream into its component products, i.e. propane, butane, natural gasoline, etc. (fractionators); or (3) store the liquid hydrocarbon output of plants and fractionators.

The mailing list is automated. It is maintained by matching periodically with the *LP Gas Almanac* listings (including supplements) and the *Oil and Gas Journal* Processing Plant Survey listings, and by making changes reported by the respondents.

#### Information Collected

The data are submitted monthly by facility and include all products that the company controls through possession, regardless of ownership. The main items of information collected by the EIA-64 are shown by the example of the form presented below.

#### Collection Methods

Completed reports are required to be postmarked 20 days following the last day of the report month. Follow-up telephone calls are made to nonrespondents in order to collect data before publication of the aggregated data.

#### Imputing Missing Data

Imputation is performed only for companies that submitted a report in the previous month. For such companies, previous monthly values are used for current values. The previous month's ending stocks value is used for both the current month's beginning stocks and the current month's ending stocks. The value of shipments is adjusted to balance stock level, production, receipts, plant fuel use, and losses. In the event that the previous month's data were estimated, the respondent is contacted and requested to submit estimates, if necessary, to be followed by a resubmission of actual data.

#### Response Rates

The initial response rate averages 85 percent, with a final response averaging 98 percent as a result of telephone follow-up procedures.

#### Data Processing

Upon receipt, the reports are reviewed for identification section omissions, duplicate submissions, and identification information changes. The data are then entered and edited. The edit program includes checks for invalid data entry codes, range checks for current-month to previous-month changes (absolute and relative), arithmetic calculation errors, line balancing errors, etc. Telephone calls are made to respondents to resolve questions.

## Note 1.2 EIA-87, 88, 89 and 90: Joint Petroleum Reporting System

### Background

The Joint Petroleum Reporting System (JPRS) comprises four surveys: the "Refinery Report" (EIA-87); the "Bulk Terminal Stocks Report" (EIA-88); the "Pipeline Products Report" (EIA-89); and the

## Natural Gas Liquids Operations Report

This Report is Mandatory Under Public Law 93-275. Failure to Comply may Result in Criminal Fines, Civil Penalties and Other Sanctions as Provided by Law.

Report Type:

B	1	0
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EIA Company Identification Number:

Report Date (Last Day of

Reporting Month):

OMB No.1905-0108

If Resubmission, Insert X in Block: ☐ For DOE Use Only:

**Plant Name:**

## Section 1. Natural Gas Processing Plant and Fractionator Operations (Barrels of 42 Gallons)

[illegible]



"Crude Oil Stocks Report" (EIA-90). This group of forms collects data on petroleum refinery operations and on storage of crude oil and petroleum products. The origins of JPRS lie in the voluntary petroleum reporting systems instituted by the Bureau of Mines (BOM) soon after it was established as a part of the Department of the Interior in May 1910.

## Description of Survey

### Universe

The respondent universe of each JPRS survey is defined as follows:

**EIA-87:** All petroleum refineries and plants producing finished motor gasoline through the mechanical blending of liquids which are operated or controlled in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Hawaiian Foreign Trade Zone, and Guam.

**EIA-88:** All bulk terminal facilities in the 50 States and the District of Columbia, Puerto Rico, and the Virgin Islands that (a) have total bulk storage capacity of 50,000 barrels or more and/or (b) receive petroleum products by tanker, barge, or pipeline regardless of ownership of the material.

**EIA-89:** All products pipeline companies that carry petroleum products (including interstate, intrastate and intracompany pipelines) in the 50 States and the District of Columbia.

**EIA-90:** Crude oil pipeline companies (gathering and trunk pipeline companies), crude oil producers, terminal operators, storers of crude oil, and companies transporting Alaskan crude oil by water (in excess of 1,000 barrels), regardless of ownership in the 50 States and the District of Columbia.

The list of respondents is kept current by checking for new respondents in the *Oil and Gas Journal*, a weekly magazine; newspaper articles; the Office of Resource Applications publication "Trends in Refinery Capacity & Utilization;" the Office of Refinery Operations (ERA) list of U.S. Refiners; and the annual survey EIA-177 "Capacity of Petroleum Refineries."

### Information Collected

The main items of information collected by EIA-87, are shown by the example presented below. The EIA-88 and EIA-89 collect data on petroleum product stocks. The EIA-90 collects data on crude oil stocks and crude oil used directly as fuel.

### Collection Methods

The data for the JPRS surveys are collected on a monthly basis. Completed forms are required to be postmarked by the 20th day following the report month. Telephone follow-up calls are made to nonrespondents in order to collect data before publication deadline. An automated mailing list is maintained and is used to monitor receipt of the forms.

### Imputing Missing Data

Imputation is performed only for companies that submitted a report in the previous month. For these companies, the previous monthly values are used for current values. The previous month's ending stocks value is used for both the current month's beginning stocks and the current month's ending stocks. The value of shipments is adjusted to balance stock level, production receipts, and losses. In the event that previous month's data were estimated, the respondent is contacted and requested to submit estimates if necessary, to be followed by a resubmission of actual data.

### Response Rates

As of the filing deadline, the response rate of the JPRS respondents is over 90 percent. All companies that have not responded are contacted by telephone. Although data are taken by telephone to expedite processing, a certified submission is still required. Thirty calendar days after the report month, data for companies that still fail to file the form are estimated based on prior month's data. Names of companies that fail to file for two consecutive months are forwarded to DOE for further noncompliance action. Response rate is 100 percent.

Report Type: **B 0 1** EIA Company Identification No.: Report Period:  Yr.  Mo.

SECTION 6. REFINERY STOCKS, RECEIPTS, INPUTS, PRODUCTION, SHIPMENTS AND REFINERY FUEL USE AND LOSSES (Thousands of Barrels of 42 Gallons)								
ITEM DESCRIPTION	PRO- DUCT CODE	STOCKS BEGINNING OF MONTH A	RECEIPTS DURING MONTH B	INPUTS DURING MONTH C	PRODUCTION DURING MONTH D	SHIPMENTS DURING MONTH E	REFINERY FUEL USE AND LOSSES DURING MONTH F	STOCKS END OF MONTH G
Crude oil (incl. lease condensate) Total (sum of codes 010 and 020)	050				X			
Domestic (incl. Alaskan)	010	X		X	X	X	X	X
Foreign	020	X		X	X	X	X	X
Alaskan	011	X		X	X	X	X	X
Products of natural gas proc. plants:								
Ethane	110				X			
Propane	231				X			
Ethane-propane mixtures	241				X			
Isobutane	233				X			
Normal butane	235				X			
Other butanes	236				X			
Butane - propane mixtures	234				X			
Natural gasoline and isopentane	220				X			
Plant condensate	210				X			
Unfractionated stream	227				X			
Other hydrocarbons and hydrogen	090				X			
Alcohol	091				X			
Unfinished oils	812							
Gasoline:								
Finished leaded, motor	132							
Finished unleaded, motor	133							
Blending components, motor	134							
Gasohol	135							
Finished aviation	111							
Blending components, aviation	112							
Special naphthas (solvents)	051							
Jet fuel:								
Naphtha-type	211							
Kerosene-type	213							
Kerosene (incl. range oil)	311							
Distillate fuel oil, Low No. 4	412							
No. 4 fuel oil	414							
Residual fuel oil	511							
Lubricating oils:								
Bright stock	853							
Neutral	855							
Other	859							
Asphalt	900							
Wax:								
Microcrystalline	061							
Crystalline-fully refined	071							
Crystalline-other	081							
Petroleum coke:								
Marketable	021							
Catalyst	022							
Road oil	031							
Still gas:								
Petrochemical feedstock use	042							
Other use	044							
Ethane and/or ethylene:								
Petrochemical feedstock use	612							
Other use	652							
Propane and/or propylene:								
Petrochemical feedstock use	613							
Other use	653							
Butane and/or butylene:								
Petrochemical feedstock use	614							
Other use	654							
Butane-propane mixtures:								
Petrochemical feedstock use	616							
Other use	656							
Isobutane petrochemical feedstock use	615							
Naphtha - less than 400° end-point Petrochemical feedstock use	822							
Other oils - over 400° end-point Petrochemical feedstock use	824							
Other finished products Non - fuel use	097							
Fuel Use	098							
Overage (Inputs) or shortage (production)	911							
TOTAL	999							

## **Note 1.3 EIA-161, 162, 163, 164 and 165: Weekly Petroleum Reporting System**

### **Background**

The Weekly Petroleum Reporting System (WPRS) comprises five surveys: the "Refinery Report" (EIA-161); the "Bulk Terminal Stocks Report" (EIA-162); the "Pipeline Product Stock Report" (EIA-163); the "Crude Oil Stocks Report" (EIA-164); and the "Imports Report" (EIA-165).

The EIA weekly reporting system was designed to collect data similar to those collected under the monthly Joint Petroleum Reporting System (JPRS) (See Note 1.2). In the WPRS, selected petroleum companies report weekly data to EIA on crude oil and petroleum product stocks, refinery inputs and production, and crude oil and petroleum product imports. On the Forms EIA-161 through EIA-164, companies report data on a custody basis. On the Form EIA-165, the importer of record reports each shipment entering the United States. Current weekly data and the most recent monthly data from the JPRS are used to estimate the published weekly totals.

### **Description of Survey**

#### **Universe**

The sample of companies that report weekly in the WPRS was selected from the universe of companies that report monthly in either the JPRS system or the ERA-60 system (for imports). All sampled companies report data only for facilities in the 50 States and the District of Columbia.

The sampling frame for each weekly survey is defined as follows:

**EIA-161:** Uses the EIA-87 universe, which includes all petroleum refineries in the United States and its territories, industrial facilities that have crude oil distillation capacity and produce some refined petroleum products, and bulk terminals that blend motor gasoline.

**EIA-162:** Uses the EIA-88 universe, which includes all bulk terminal facilities in the United States and its territories that have total bulk storage capacity of 50,000 barrels or more, or that receive petroleum products by tanker, barge, or pipeline.

**EIA-163:** Based on the EIA-89 universe, which includes all petroleum product pipeline companies in the United States and its territories that transport refined petroleum products, including interstate, intrastate and intracompany pipeline movements. Pipeline companies that only transport natural gas liquids are not included in the EIA-163 frame. Only those pipeline companies which transport products covered in the weekly survey are included.

**EIA-164:** Uses the EIA-90 universe, which consists of all trunk pipeline companies in the United States and its territories which transport crude oil, all refining companies, all crude oil producers, all terminal operators, and all storers of 1,000 barrels or more of crude oil.

**EIA-165:** Uses the ERA-60 universe, which includes all importers of record of crude oil and petroleum products into the United States and Puerto Rico.

#### **Sampling**

The sampling procedure used for the weekly system is the cut-off method. In the cut-off method, companies are ranked from largest to smallest on the basis of the quantities reported during some previous period. Companies are chosen for the sample beginning with the largest and adding companies until the total sample covers about 90 percent of the total for the previous time period.

#### **Collection Methods**

Data are collected by mail, mailgram, telephone, Telex, and Telefax on a weekly basis. All canvassed firms and terminal operating companies must file by 5:00 p.m. on the Monday following the close of the report period, 7 a.m. Friday. During the processing week, company corrections of the prior week's data are also entered.

## Formula and Calculations

After the company reports have been checked and entered into the weekly data base, ratio estimates of the weekly totals are calculated from the reported data.

First, the current week's data for a given product reported by companies in that region are summed. (Call this weekly sum,  $W_s$ .) Next, the most recent month's data for the product reported by those same companies are summed. (Call this monthly sum,  $M_s$ .) Finally, let  $M_t$  be the sum of the most recent month's data for the product as reported by *all* companies. Then, the current week's ratio estimate for that product for all companies is given by.

$$W_t = \frac{M_t}{M_s} \circ W_s$$

This procedure is used directly to estimate total weekly inputs to refineries and production.

To estimate stocks of finished products, the preceding procedure is followed separately for refineries, bulk terminals, and pipelines. Total estimates are formed by summing over establishment types.

Weekly imports data are highly variable on a company-by-company basis or a week-by-week basis. Under such conditions, the ratio method is known to result in large errors. Hence, a number of other procedures for estimating weekly imports were considered. The average ratio method was selected for estimating imports because it produces estimates that were close to benchmark values computed from monthly data. Estimates are obtained using the ratio method, but with each company in turn omitted from the sample. These estimates are then averaged to obtain the average ratio estimate.

## Imputing Missing Data

The ratio method of estimation automatically imputes for nonresponse. Data from companies that do not respond are excluded from both the weekly and the monthly totals for the sampled companies.

## Response Rates

The response rate as of the day after the filing deadline is about 80 percent for the EIA-161; 75 percent for the EIA-162; 95 percent for the EIA-163; 80 percent for the EIA-164; and greater than 95 percent for the EIA-165. However, more forms are received the next day, bringing the final response rates up. Late respondents are contacted by telephone. Nearly all of the major companies report on time. The nonresponse rate for the published estimates is usually between 2 percent and 5 percent.

# Note 1.4 EIA-170: Tanker and Barge Shipments of Crude Oil and Petroleum Products Between Districts

## Background

The EIA-170 survey collects data for calculation of monthly petroleum supply and disposition figures on U.S. and PAD District levels.

## Instrument and Design

This form is designed to collect data on total movements by tanker and barge of crude oil and petroleum products between PAD Districts or between PAD Districts and the Panama Canal, by shipping State and receiving State.

## Universe

The respondent universe of the EIA-170 consists of all known companies and plants that have custody of crude oil and petroleum products transported by tanker and barge between PAD Districts or between PAD Districts and the Panama Canal. There are currently about 60 respondents.

### **Collection Methods**

Survey data are collected by mail every month. The filing deadline is the 20th calendar day of the month following the report period. The response rate as of the filing deadline is about 98 percent. Late respondents are contacted by telephone. All responses are processed each month before release of the data for publication.

## **Note 1.5 ERA-60: Reports of Oil Imports into the United States and Puerto Rico**

### **Background**

The "Report of Oil Imports into the United States and Puerto Rico" (ERA-60) survey was designed by the Economic Regulatory Administration (ERA) of the Department of Energy to collect data on port of entry, country of origin, destination, and quantity of imported crude oil and petroleum products, as well as sulfur content and API gravity. All licensed importers and importers of record are required to report. The "Shipments of Refined Products from Puerto Rico to the United States" (P-133-M-O) survey was designed to collect data on imports to the United States that are not covered by the ERA-60.

### **Universe**

The monthly submission of Form ERA-60 and P-133-M-O is required by all licensed importers and importers of record into the United States and Puerto Rico. The respondent universe consisted of approximately 750 firms as of June 30, 1981. The respondent universe for these surveys is updated whenever an import license is granted by the Office of Oil Imports of the ERA.

### **Collection Methods**

The survey data are collected by mail each month. It is mandatory for each respondent to file the ERA-60/P-133-M-O by the 15th working day of the month following the reporting period. Resubmissions are received frequently and are processed when received.

### **Response Rates**

In December 1980, the survey had a response rate of 92 percent by the filing deadline. The universe was 640 at that time. (Because this is a dynamic survey, the universe is constantly changing.) Standard followup of nonrespondents is made to insure that all reports are received, since data are not imputed for nonrespondents. Response rate is generally 98-99% by the time the data are first published. Revised publications are not generated as standard operating procedure. The ERA-60 file is never closed; resubmissions are constantly received and processed.

## **Note 1.6 Census Import (IM-145) and Export (EM-522 and EM-594) Tabulations**

The foreign trade statistics program, conducted by the Bureau of the Census, involves compilation and dissemination of a large body of data relating to the imports and exports of the United States.

### **Import Statistics**

#### **Coverage**

The import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. Customs territory (includes the 50 States, the District of Columbia, and Puerto Rico), without regard to whether or not a commercial transaction is involved. In general, the statistics record the physical movement of merchandise into the United States from foreign countries, with the exception of the following types of transactions that are excluded from the statistics:

1. Merchandise shipped in transit through the United States, when documented with Customs as an intransit movement.
2. Shipments between the United States and Puerto Rico, the Virgin Islands, Guam, American Samoa, and other U.S. possessions; shipments between any of these outlying areas; and imports into U.S. possessions from foreign countries.
3. U.S. merchandise returned by U.S. Armed Forces for their own use.

#### **Source of Import Information**

The official U.S. import statistics are compiled by the Bureau of the Census from copies of the import entry and warehouse withdrawal forms that importers are required by law to file with Customs officials (Customs Forms 7501- 7505).

Imported petroleum is reported as "Imports for Consumption." Imports for consumption are a combination of entries for immediate consumption and withdrawals from warehouses for consumption. With certain exceptions as indicated above, these data generally reflect the total of commodities entered into U.S. consumption channels.

#### **Country and Area of Origin**

The country reported in the statistics as the country of origin is defined as the country where the merchandise was grown, mined, or manufactured. In instances where the country of origin cannot be determined, the transactions are credited to the country of shipment.

### **Export Statistics**

#### **Coverage**

The export statistics reflect both government and nongovernment exports of domestic and foreign merchandise from the U.S. Customs territory (includes the 50 States, the District of Columbia, and Puerto Rico) to foreign countries, without regard to whether or not the exportation involves a commercial transaction. In general, the statistics record the physical movement of merchandise out of the United States to foreign countries, with the exception of the following types of transactions:

1. Shipments between the United States and Puerto Rico, the Virgin Islands, Guam, American Samoa, and other U.S. possessions; between any of these outlying areas; and shipments from U.S. Possessions to foreign countries.
2. Merchandise shipped in transit through the United States from one foreign country to another, when documented as such with U.S. Customs.
3. Bunker fuels and other supplies and equipment for use on departing vessels, planes, or other carriers engaged in foreign trade.

#### **Source of Export Information**

The official U.S. export statistics are compiled by the Bureau of the Census primarily from copies of Shipper's Export Declarations. Shipper's Export Declarations are required to be filed with Customs officials, except when qualified exporters have been authorized to submit data in the form of magnetic tape, punched cards, or monthly Shipper's Summary Export Declarations directly to the Bureau of the Census.

#### **Country and Area of Destination**

The country of destination is defined as the country of ultimate destination or the country where the goods are to be consumed, further processed, or manufactured, as known to the shipper at the time of exportation. If the shipper does not know the country of ultimate destination, the shipment is credited to the last country to which the shipper knows that the merchandise will be shipped in the same form as it was when exported.

## Note 2 Estimation

The geographic coverage of all estimates is the 50 United States and the District of Columbia, including adjacent areas of the outer continental shelf, excluding the Hawaiian Foreign Trade Zone.

### Note 2.1 Supply

The components of petroleum supply are field production, refinery production, imports, stock withdrawal or addition, crude oil used directly, and losses.

**Field Production** is the sum of crude oil (including lease condensate) production, natural gas processing plant production, and new supply (field production) of other liquids used by refineries.

Crude oil production is estimated based on data received from State conservation and revenue agencies. Reports of crude oil production from each of the 31 producing States are not received until several months after the other components of petroleum supply described in Explanatory Note 2.1 are available for publication. For an explanation of the crude oil estimation procedure used until the State reports are complete, see Explanatory Note 2.2.

Field production of natural gas plant liquids (NGPL), including finished petroleum products, is reported monthly on survey Form EIA-64, "Natural Gas Liquids Operation Report." Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. For survey description and other detail, see Explanatory Note 1.1.

Field production of natural gas plant liquids (NGPL), including finished petroleum products, is reported monthly on survey Form EIA-64, "Natural Gas Liquids Operations Report." Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. For survey description and other detail, see Explanatory Note 1.1.

**Refinery Production** of LRGs, ethane, and finished petroleum products is reported monthly on survey Form EIA-87, "Refinery Report." Published production of these products equals refinery production minus refinery input. Refinery production of unfinished oils and of motor and aviation gasoline blending components appears on a net basis under refinery input. Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month.

Refinery production is also reported weekly on survey Form EIA-161, "Refinery Report." See Explanatory Notes 1.2 and 1.3 for survey descriptions and other detail. It should also be noted that refineries do not report production of crude oil, natural gasoline, isopentane, unfractionated stream, plant condensate, or other hydrocarbons and alcohol.

**Imports** of crude oil and petroleum products are reported monthly on Form ERA-60, "Report of Oil Imports into the United States and Puerto Rico," and Form P-133-M-O, "Shipments of Refined Products (including unfinished oils) from Puerto Rico to the United States." In addition, the Census Bureau Tabulation IM-145 summarizes import data from Customs import declarations reported on Customs Forms 7501 and 7505. The most prominent difference between the EIA and Census systems appears in imports of liquefied petroleum gases (LPG), where Census data show a much higher level of imports than Energy Information Administration data. This occurs because the ERA-60 respondent frame was built by monitoring importers of licensed products and because LPGs are not licensed products. Therefore, respondents that only import LPGs have not been identified, and do not report these imports to the Department of Energy. Since these importers are required to file form 7501 with the U.S. Customs Service, EIA obtains data on imports of LPGs from Census Tabulation IM-145. Additional data taken from the IM-145 are relatively small quantities of naphtha and kerosene-type jet fuels, distillate fuel oils, and residual fuel oils withdrawn from bonded storage for use in international trade and for military offshore use. Even though these duty-free fuels are stored on United States shores, they did not enter the United States for domestic consumption and therefore are not included in the ERA-60 reporting system.

Imports are also reported weekly on survey Form EIA-165, "Imports Report." See Explanatory Notes 1.3, 1.5, and 1.6 for survey descriptions and other detail.

**Stock Withdrawal (+) or Addition (-)** is calculated by subtracting stocks at the end of the month from stocks at the beginning of the month. (Note: The beginning stocks of one month are equal to the ending stocks of the previous month.) A positive result (+) would represent a withdrawal from stocks and an increase in petroleum supplies distributed for domestic consumption. A negative result (-) would represent a buildup of stocks and reduce petroleum supplies distributed for domestic consumption. For survey forms used to make stock withdrawal or addition calculations see Explanatory Note 2.4.

**Unaccounted-for Crude Oil** is a balancing item that represents the difference between crude oil supply and disposition. Crude oil supply is the sum of field production, imports and stock withdrawal or addition, less crude used directly and losses. Crude oil disposition is the sum of exports and refinery input.

Unaccounted-for crude oil is calculated by subtracting crude oil supplies from crude oil disposition. A negative result indicates that refiners and exporters reported use of more crude oil than was reported to have been available to them. (This occurs, for example, when imports are undercounted due to late reporting or other problems.) A negative result would indicate that more crude oil was reported to have been supplied to refiners and exporters than they reported used. This calculation is performed for crude oil to ensure that product supplied for crude oil is always zero.

**Crude Oil Used Directly and Losses** is the sum of crude oil losses at refineries, crude oil burned at refineries, and crude oil burned on leases. Crude oil losses and consumption at refineries are reported on Form EIA-87, "Refinery Report." Crude oil burned on leases is reported on Form EIA-90, "Crude Oil Stocks Report." Crude oil burned on leases is divided into two categories: crude burned as residual fuel oil and crude burned as distillate fuel oil. Crude burned on leases appears as a negative supply to crude oil (a reduction in crude oil supplies) and as a positive supply to residual and distillate fuel oil (an increase to these supplies).

## Note 2.2: Domestic Crude Oil Production

Data for the Crude Oil Production System (COPS) are reported to the Department of Energy by each of the individual State conservation agencies, which collect crude oil production values for tax purposes. In addition, the U.S. Geological Survey reports the volume of crude oil that is produced offshore in Federally-owned waters. With the exception of six State conservation agencies, all of these reports are received monthly. After each calendar year, these monthly numbers are updated using the annual reports from the State conservation agencies and the U.S. Geological Survey. The six States that do not report monthly values are Indiana, New York, Ohio, Pennsylvania, West Virginia, and Wyoming. Monthly values are estimated for these States using the individual linear trends of their historical annual crude oil production values.

There is a time lag of approximately 3 to 4 months between the end of the reporting month and the time when the actual values are available for this publication. In order to provide more timely crude oil production estimates, the Department of Energy has established a series of statistical models that forecast the volume of crude oil production based on the historical production patterns. The models use Auto Regressive Integrated Moving Average (ARIMA) to analyze series of monthly crude oil production values collected over several years.

In order to provide detailed crude oil production information on both the PAD District level and for the major producing States, the total United States crude oil production volume was separated into nine distinct groupings. The nine different time series are the monthly reported crude oil production volumes for: (1) all the States in PAD District 1; (2) all the states in PAD District 2; (3) Texas; (4) Louisiana; (5) the States in PAD District 3 excluding Texas and Louisiana; (6) all the States in PAD District 4; (7) Alaska; (8) California; and (9) the States in PAD District 5 excluding Alaska and California. Monthly data collected beginning in January 1973 are used for each of these time series.



A separate ARIMA model is identified for each time series. New model parameters are estimated monthly for each of these nine updated time series. Then, these ARIMA models are used to forecast crude oil production volumes for the month of interest. These values are then aggregated into PAD District and national totals. The forecasts made during 1981 had an average error of less than 0.6 percent compared to the monthly crude oil production volumes eventually reported by the States.

## Note 2.3 Disposition

The components of petroleum disposition are refinery input, exports, and products supplied for domestic consumption.

**Refinery Inputs** of crude oil, NGPL and other liquids are reported monthly on survey Form EIA-87, "Refinery Report." Published inputs of unfinished oils, and motor and aviation gasoline blending components, equal refinery input minus refinery output. Refinery inputs of finished petroleum products are reported on a net basis under refinery production. Refinery inputs are also reported weekly on survey Form EIA-161, "Refinery Report." See Explanatory Notes 1.2 and 1.3 for survey description and other details.

**Exports** of crude oil and petroleum products are compiled from Census Bureau tabulations EM522 and EM594. Exports include crude oil shipments to Puerto Rico, the Virgin Islands, and the Hawaiian Foreign Trade Zone, which are obtained from refinery receipts reported on Form EIA-87.

**Product supplied** for each product is calculated by summing field production plus refinery production, plus imports, plus stock withdrawal or minus stock addition, plus crude oil used directly and losses (plus net receipts when calculated on a PAD District basis), minus refinery input, minus exports. This formula ensures that total disposition equals total supply. Products supplied indicates those quantities of petroleum products supplied for domestic consumption. Occasionally, the result for a product is negative when total disposition of that product exceeds total supply. Negative product supplied may occur for a number of reasons: (1) product reclassification has not been reported, (2) misreporting or delayed reporting of data, and (3) for calculations on a PAD District basis, incomplete coverage of interdistrict movements data compiled to calculate net receipts.

## Note 2.4 Stocks

Primary stocks of crude oil are the sum of ending stocks reported monthly on Form EIA-87, "Refinery Report," and Form EIA-90, "Crude Oil Stocks Report." Crude oil held in the Strategic Petroleum Reserve is included unless otherwise noted. Alaskan crude oil in transit is also included. Stocks of crude oil are also reported weekly on Form 161, "Refinery Report," and Form EIA-164, "Crude Oil Stocks Report." Primary stocks of petroleum products are summed from data reported on the Form EIA-64, "Natural Gas Liquids Operations Report," Form EIA-87, "Refinery Report," Form EIA-88, "Bulk Terminal Stocks Report," and Form EIA-89, "Pipeline Products Stocks Report." Primary stocks of petroleum products do not include secondary stocks held by dealers and jobbers, or stocks held by consumers. Petroleum product stocks are also reported weekly on Form EIA-161, "Refinery Report," Form EIA-162, "Bulk Terminal Stocks Report," and Form EIA-163, "Pipeline Products Stocks Report." For survey descriptions and other details see Explanatory Notes 1.1, 1.2, and 1.3.

## Note 2.5 Average Stock Levels

The graphs displaying monthly stock levels of petroleum products, crude oil, motor gasoline, distillate fuel oil, residual fuel oil, liquified petroleum gases and ethane, and other products provide the user with recent data as well as a summary of data from the most recent 3 year period from January through December or from July through June. This summary takes the form of an "average range" that includes seasonal variation determined from a longer time period. The average range represents the historical pattern; it is not a forecast.

These curves are updated every 6 months effective January 1 or July 1 by basing the "average ranges" on a more recent time period. At that time, each 3-year data series will be adjusted by dropping the first 6 months and including the most recent 6 months.

For each data series, the monthly seasonal factors were estimated by means of a seasonal adjustment technique developed at the Bureau of Census (Census X-11). The seasonal factors were assumed to be stable (i.e., unchanging from year to year) and additive (i.e., the series is deseasonalized by subtracting the seasonal factor for the appropriate month from the reported stock levels). The intent of deseasonalization is to remove only seasonal variation from the data. Thus, a deseasonalized series would contain the same trends and irregularities as the original data. For crude oil stocks, the derived seasonal factors were very small relative to crude oil stock levels. Therefore, the seasonal factors for crude oil stock levels were set to zero. The seasonal factors for total petroleum (crude and products), distillate fuel oil, residual fuel oil, liquefied petroleum gases and ethane, and other products were derived using monthly data from 1974-1980. For motor gasoline, the seasonal factors were based on monthly data from 1975, 1976, 1978, 1979 and 1980. In 1977, there was virtually no seasonal behavior in motor gasoline stocks. Monthly stock levels stayed at the same high level for the entire year. In addition, the seasonal patterns in 1973 and 1974 appeared to be different from those in recent years. It was therefore assumed that the seasonal patterns in 1973, 1974, and 1977 were not representative of the recent past, and these years were not used in the determination of seasonal patterns for motor gasoline stocks. Because of these differences in the year-to-year seasonal fluctuation of motor gasoline, the evidence for the illustrated seasonal patterns for total petroleum (crude and products), crude oil, distillate fuel oil, residual fuel oil, liquefied petroleum gases and ethane, and other products is stronger than is the evidence for the illustrated seasonal patterns for motor gasoline.

In some cases, these seasonal patterns do not show a smooth transition from month to month. For example, the June factor for residual fuel oil is slightly less than the May and July values, making a bump in the curve. As there is little difference in the magnitude of these seasonal factors, it is possible that this variation is due to the small number of observations (7 years) and the data variability.

After seasonal factors are derived, the most recent 3 year period (from January through December or from July through June) is deseasonalized. The average of the deseasonalized 36-month series determines the midpoint of the deseasonalized average band. The standard error of the deseasonalized 36 months is calculated adjusting for extreme data points. The width of the "average range" is twice this standard error.

The upper curve of the "average range" is defined as the average plus the seasonal factors plus the standard error. The lower curve is defined as the average plus the seasonal factors minus the standard error.

## Note 2.6 Movements

Movements of crude oil between PAD Districts are reported on Form EIA-170, "Tanker and Barge Report." Petroleum product movements are reported on Forms EIA-170 and EIA-89, "Pipeline Products Report." Net receipts are calculated by summing total movements into and total movements from each PAD District by pipelines, tankers, and barges, and subtracting for the difference. Movements of crude oil by pipeline are not reported. For survey descriptions and other detail, see Explanatory Notes 1.2 and 1.4.

## Note 2.7 Preliminary Monthly Statistics

Data from the Weekly Petroleum Reporting System (Forms EIA-161, 162, 163, 164 and 165) are used to estimate the most recent monthly values for the historical statistics. Since some of the weekly reporting periods overlap 2 adjacent months, it is necessary to use weighting factors in the calculation of the monthly values.

To calculate monthly estimates of crude oil and petroleum product imports, crude oil input to refineries, and production of petroleum products for a specific month, the weekly estimates are weighted by the number of days of that month included in each week, then summed.

End-of-month stock levels of crude oil and the major products (motor gasoline, distillate fuel and residual fuel) are calculated in a similar manner, but use only the two weekly reporting periods that cover the end-of-week stocks before and after the end of the month. The end-of-month stock level is calculated by first calculating the stock change between the 2 weeks. The daily stock change between the two end-of-week stock levels is then calculated. This number is multiplied by the weighting factor of earlier of the 2 weeks (the week that covers the last day of the month of interest). This change is added to the earlier of the two end-of-week stock levels to estimate the end-of-month stock level.

Preliminary monthly estimates of domestic crude oil production are calculated as described in Explanatory Note 2.2.

### Note 3 Accuracy of Petroleum Supply Data

Early in 1981, the Energy Information Administration completed an assessment of the accuracy of principal petroleum supply data series. <sup>1</sup>This assessment concentrated on two methods of analysis:

- Comparisons between EIA's final annual estimates published in the *Petroleum Statement Annual (PSA)* and annual estimates from independent sources.

- Comparisons between EIA's final monthly estimates published in the *PSA* and EIA's earlier estimates published in the *Monthly Petroleum Statistics Report* and the *Petroleum Statement, Monthly* (predecessor of the *Monthly Petroleum Statement*).

Selected excerpts from these comparisons are presented below.

#### Comparisons of Annual Estimates

All of the systems that provide data for the *Petroleum Supply Monthly*, except for the weekly systems, try to collect data from the entire universe of their potential respondents. They do not sample, and have no sampling errors. Inaccuracies in the data still occur because of problems such as incomplete lists of respondents, errors in the responses, and conceptual errors in the design of the data systems. Such inaccuracies are hard to identify and even harder to quantify. Some understanding of the overall accuracy of the estimates can be achieved by comparing estimates derived from independent sources of data, as shown in the following tables. Close agreements among annual estimates from several independent sources support the conclusion that the estimates are accurate, and accuracy in the annual estimates implies accuracy in the monthly estimates that comprise the annual estimates.

#### Crude Oil Production

Comparisons among independent estimates of annual crude oil and lease condensate production lead to the conclusion that the *PSA* estimates are probably accurate to within 1 percent.

#### Crude Oil Imports

Comparisons among independent estimates of annual crude oil imports lead to the conclusion that the *PSA* estimates are probably accurate to within 1 percent. This conclusion is supported by a study of EIA and Customs/Census import data performed for EIA.<sup>2</sup>

#### Motor Gasoline Supplied

Comparisons among independent estimates of the annual volume of motor gasoline supplied for domestic use show that differences in the estimates grew between 1977 and 1979. By 1979, the EIA estimate of sales by refiners and the Environmental Protection Agency's estimate of production had grown about 5-7 percent larger than the comparable *PSA*, Lundberg, and American Petroleum Institute (API) estimates. Research conducted by EIA in 1979 and 1980<sup>3</sup> confirmed that the lower

<sup>1</sup>An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration, DOE/EIA-0292, June 1981.

<sup>2</sup>Maxima Corporation, *Petroleum Imports Reporting Systems, Preliminary Draft*, (Silver Spring, Maryland: February 1980). Prepared for the Office of Energy Information Validation, Energy Information Administration, U.S. Department of Energy, Washington, D.C.

<sup>3</sup>Office of Energy Information Validation, Energy Information Administration, U.S. Department of Energy, *An Evaluation of Published EIA Gasoline Supply Estimates* (Washington, D.C.: April 1980).

estimates were inaccurate, and identified changes in the petroleum industry that had an adverse effect on the PSA estimate. During 1980, EIA developed and tested improved procedures for collecting petroleum supply data, and implemented them in January 1981. (See Explanatory Note 4.)

### Distillate Fuel Oil Supplied

Comparisons among independent estimates of the annual volume of distillate fuel oil supplied for domestic use lead to the conclusion that the PSA estimates are probably accurate to within 1 to 2 percent.

### Residual Fuel Oil Supplied

Comparisons among independent estimates of the annual volume of residual fuel oil supplied for domestic use seem to show sizable and consistent differences between the EIA estimates of sales by refiners and the PSA and API estimates. When imports of residual fuel oil by nonrefiners are added to the refiner sales, however, the difference between refiner sales and the PSA estimates are narrowed to within 1 percent. The comparisons therefore lead to the conclusion that the PSA estimates are probably accurate to within 1 to 2 percent.

### Comparison of Estimates of the Volume of Crude Oil and Lease Condensate Production, 1977-1979

	Estimated Volume of Production in Millions of 42-U.S. Gallon Barrels <sup>a</sup>			Comparative Estimate as a Percent of the PSA Estimate		
	1979	1978	1977	1979	1978	1977
EIA Estimate from Petroleum Statement Annual <sup>b</sup>	3,121	3,178	3,009	///	///	///
<u>Comparative Estimates</u>						
American Petroleum Institute Estimate from API Monthly Statistical Report <sup>c</sup>	3,130	3,214	3,021	100.3%	101.1%	100.4%
Census Estimate from the Annual Survey of Oil and Gas <sup>d</sup>	—	3,148	3,016	—	99.1%	100.2%
Oil and Gas Journal Estimates <sup>e</sup> of Total Production derived from Monthly Data	3,168	3,165	3,005	101.5%	99.6%	99.9%
EIA Estimate from Annual Survey of Oil and Gas Reserves (EIA-23) <sup>f</sup>	3,102	3,144	3,001	99.4%	98.9%	99.7%
/// = Not applicable						
— = Not available						

<sup>a</sup>Volumes are rounded to the nearest million barrels.

<sup>b</sup>From Table 6 in EIA's *Petroleum Statement Annual*, 1977, 1978, 1979.

<sup>c</sup>From issues of the American Petroleum Institute's *Monthly Statistical Report*. The annual values were obtained by summing the monthly values for each of the twelve-month periods.

<sup>d</sup>From Table 1, p.2 of the Bureau of Census' *Annual Survey of Oil and Gas*, 1978.

<sup>e</sup>From issues of the *Oil and Gas Journal*. Monthly estimates are in thousands of barrels per day. They are converted to millions of barrels by dividing by 1,000 and multiplying by the number of days in the reporting period.

<sup>f</sup>From EIA's *U.S. Crude Oil and Natural Gas Reserves 1979 Annual Report* (Table 19, p. 33), *1978 Annual Report* (Table 16, p. 20), and *1977 Annual Report* (Table 22, p.36).

Geographic coverage: the 50 United States and District of Columbia with adjacent areas of the Outer Continental shelf.

SOURCE: *An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292.

# Comparison of Estimates of the Volume of Crude Oil Imports, 1977-1979

	Volume of Millions of 42-U.S. Gallon Barrels <sup>a</sup>			Comparative Estimates as a Percent of the Primary Estimate		
	1979	1978	1977	1979	1978	1977
EIA Estimate of Receipts at Ports of Entry (ERA-60) from <i>Petroleum Statement, Annual</i> <sup>b</sup>	2,380	2,320	2,414	///	///	///
<u>Comparative Estimates</u>						
American Petroleum Institute Estimate of Receipts as Reported by Refiners <sup>c</sup>	2,346	2,323	2,360	98.6%	100.1%	97.8%
Customs/Census Estimate of Receipts at Ports of Entry (Customs Forms 7501 and 7502) <sup>d</sup>	2,415	2,338	2,431	101.5%	100.8%	100.7%
EIA Estimate of Inputs of Foreign Crude at Refineries (ETA-87) <sup>e</sup>	2,364	2,334	2,431	99.3%	100.6%	100.7%

/// = Not applicable

<sup>a</sup>Volumes are rounded to the nearest million barrels.

<sup>b</sup>From Table 1 in EIA's *Petroleum Statement Annual* 1977, 1978, 1979. This table also includes imports for the Strategic Petroleum Reserve (SPR) which were 7.5 million in 1977, 58.8 million in 1978, and 24.4 million in 1979.

<sup>c</sup>Estimate equals the sum of the annual estimate of imports derived from API's *Monthly Statistics Report* (which excludes imports for SPR), and the EIA estimates for imports for the SPR which are listed in footnote b above. The annual estimates from API data are equal to the sum of the API monthly estimates weighted by the number of days in each month.

<sup>d</sup>Data on imports to Puerto Rico which are included in the source for these estimates have been excluded from these estimates in keeping with the geographic coverage of the table. Data are from computer printouts of the Bureau of Census Report IM-245-X dated April 3, 1980 (1977 and 1978 data) and December 19, 1980 (1979 data).

<sup>e</sup>Estimate equals refinery inputs of foreign crude plus (minus) stock increases (decreases) of foreign crude. The data for the computation are published in EIA's *Petroleum Statement, Annuals*. The stock changes (all increases) are derived from data on stocks of crude oil at refineries, bulk terminals, and pipelines as reported on Form EIA-90, plus the increase in the SPR. This estimate excludes crude oil imported and not used as refinery input.

Geographic coverage: the 50 United States and the District of Columbia.

SOURCE: *An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292.

**Comparison of Estimates of the Volume of Motor Gasoline Supplied for Domestic Use, 1977-1979**

	Volume in Millions of 42-U.S. Gallon Barrels <sup>a</sup>			Volume Supplied as a Percent of the PSA Estimate		
	1979	1978	1977	1979	1978	1977
EIA Estimate from <i>Petroleum Statement, Annual</i> <sup>b</sup>	2,573	2,711	2,625	///	///	///
<u>Comparative Estimates</u>						
EIA Estimate of Sales by Refiners (P-306) <sup>c</sup>	2,708	2,792	2,671	105.2%	103.0%	101.8%
Environmental Protection Agency Estimate derived from Production Data <sup>d</sup>	2,766	2,851	2,706	107.5%	105.2%	103.1%
Lundberg Surveys, Inc. Estimate of U.S. Motor Gasoline Sales <sup>e</sup>	2,631	2,746	2,656	102.3%	101.3%	101.2%
American Petroleum Institute Estimate of Deliveries <sup>f</sup>	2,579	2,697	2,612	100.2%	99.5%	99.5%

/// = Not applicable

<sup>a</sup>Volumes are rounded to the nearest million 42-U.S. gallon barrels.

<sup>b</sup>Derived from Table 2 in EIA's *Petroleum Statement Annual*, 1977, 1978, 1979.

<sup>c</sup>Derived from Table 1 of EIA's December issue of *Petroleum Market Shares, Report on Sales of Refined Petroleum Products* 1977, 1978, 1979.

<sup>d</sup>The estimate shown is derived by substituting EIA Domestic Production values with values of domestic production tabulated from the Environmental Protection Agency Bq. Form 3520-2, "Lead Additive Report for Refineries." The EPA production estimates are 2,694 million barrels in 1977, 2,757 in 1978, and 2,648 in 1979 as compared from a summary sheet provided by Mr. Bob Summerhayes of EPA.

<sup>e</sup>From the mid-June issues of the "National Petroleum News," 1979 and 1980.

<sup>f</sup>API publishes monthly estimates in thousands of barrels per month of the volume of motor gasoline delivered from primary storage. The initial published monthly estimate is derived from API sources, but in later API publications the estimates are revised using EIA data. The values shown in the table are equal to the sums of the initial published API monthly estimates of motor gasoline multiplied by the number of days per month.

Geographic coverage: the 50 United States and the District of Columbia.

SOURCE: *An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292.

**Comparison of Estimates of the Volume of Distillate Fuel Oil (Including Kerosene) Supplied for Domestic Use, 1977-1979**

	Volume in Millions of 42-U.S. Gallon Barrels <sup>a</sup>			Volume Supplied as a Percent of the PSA Estimate		
	1979	1978	1977	1979	1978	1977
EIA Estimate from <i>Petroleum Statement Annual</i> <sup>b</sup>	1,269	1,307	1,275	///	///	///
<u>Comparative Estimates</u>						
EIA Estimate of Sales by Refiners (P-306) <sup>c</sup>	1,282	1,275	1,242	101.0%	97.6%	97.4%
American Petroleum Institute Estimate of Deliveries <sup>d</sup>	1,291	1,300	1,277	101.7%	99.5%	100.2%

/// = Not applicable

<sup>a</sup>Volumes are rounded to the nearest million 42-U.S. gallon barrels.

<sup>b</sup>Derived from Table 2 in EIA's "Petroleum Statement Annual", 1977, 1978, 1979.

<sup>c</sup>Derived from Table 1 of EIA's December issue of *Petroleum Market Shares, Report on Sales of Refined Petroleum Products*, 1977, 1978, 1979.

<sup>d</sup>API publishes monthly estimates in thousands of barrels per month of the volume of distillate and kerosene delivered from primary storage. The initial published monthly estimate is derived from API sources, but in later API publications the estimates are revised using EIA data. The values shown in the table are equal to the sums of the initial published API monthly estimates of distillate and kerosene multiplied by the number of days per month.

Geographic coverage: the 50 United States and the District of Columbia.

SOURCE: *An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292.

Comparison of Estimates of the Volume of Residual Fuel Oil Supplied for Domestic Use, 1977-1979.

	Volume in Millions of 42-U.S. Gallon Barrels <sup>a</sup>			Volume Supplied as a Percent of the PSA Estimates		
	1979	1978	1977	1979	1978	1977
EIA Estimate from <i>Petroleum Statement, Annual</i> <sup>b</sup>	1,024	1,095	1,109	///	///	///
<b>Comparative Estimates</b>						
EIA Estimate of Sales by Refiners (P-306) <sup>c</sup>	796	832	847	80.8%	79.6%	80.1%
American Petroleum Institute Estimate of Deliveries <sup>d</sup>	1,044	1,101	1,114	102.0%	100.5%	100.4%

/// = Not Applicable

<sup>a</sup>Volumes are rounded to the nearest million 42-U.S. gallon barrels.

<sup>b</sup>Derived From Table 2 in EIA's *Petroleum Statement Annual*, 1977, 1978, 1979. Refinery fuel use, subtracted from the figures in the source referenced below, has been reinstated in these estimates.

<sup>c</sup>Derived from Table 1 of EIA's December issue of *Petroleum Market Shares, Report on Sales of Refined Petroleum Products*, 1977, 1978, 1979.

<sup>d</sup>API publishes monthly estimates in thousands of barrels per month of the volume of residual fuel oil delivered from primary storage. The initial published monthly estimate is derived from API sources, but in later API publications the estimates are revised using EIA data. The values shown in the table are equal to the sums of the initial published API monthly estimates of residual fuel oil multiplied by the number of days per month.

Geographic Coverage: the 50 United States and the District of Columbia.

SOURCE: *An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292.

## Comparisons of Monthly Estimates Over Time

Inaccuracies in petroleum data resulting from incomplete or delayed reports from respondents and from data processing errors are usually eliminated from the final PSA estimates. Such inaccuracies can still have important effects on the monthly estimates published in the *Petroleum Supply Monthly* and its predecessors. The following tables compare the initial monthly estimates published in the *Monthly Petroleum Statistics Report* and the *Petroleum Statement, Monthly* with the final monthly estimates published in the PSA. During 1977 - 1979, the *Monthly Petroleum Statistics Report* was published about 60 days after the end of the reporting month, and the *Petroleum Statement, Monthly* was published about 120-150 days after the end of the reporting month. The tables show that, both in terms of bias and in terms of standard deviation, the later estimates are consistently more accurate than the earlier estimates. In spite of this, the earlier estimates may have been more valuable to users of energy information because of the large difference in timeliness.

For purposes of comparison, the *Petroleum Supply Monthly* is scheduled to be published on about the same time lag as the *Monthly Petroleum Statistics Report*. Caution should be exercised, however, in drawing conclusions from this similarity. The *Petroleum Supply Monthly* uses improved data processing procedures developed and successfully implemented during 1981. In addition, since 1979, EIA has greatly improved the accuracy of its 60-day crude oil production estimates and is making progress in improving the accuracy of its 60-day import estimates.

**Initial Monthly Estimates of Production, Stocks, and Imports of Crude Oil As A Percent of EIA's Final Published Estimates <sup>a</sup>**  
January 1977 - December 1979

	<u>Production During Month</u>		<u>Primary Stocks At End of Month</u>		<u>Imports During Month</u>	
	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation
EIA's Estimates from the <i>Monthly Petroleum Statistics Report</i> <sup>b</sup>	# 98.7%	1.6%	# 98.3%	1.4%	# 95.4%	2.4%
EIA's Estimates from the <i>Petroleum Statement, Monthly</i> <sup>c</sup>	# 99.6%	0.6%	100.0%	0.1%	# 98.4%	1.3%

**Initial Monthly Estimates of Products Supplied for Domestic Use as A Percent of EIA's Final Published Estimates <sup>a</sup>**  
January 1977 - December 1979

	<u>Motor Gasoline</u>		<u>Distillate Fuel Oil</u>		<u>Residual Fuel Oil</u>	
	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation
EIA's Estimates from the <i>Monthly Petroleum Statistics Report</i> <sup>b</sup>	99.9%	1.3%	99.9%	2.3%	# 97.9%	2.7%
EIA's Estimates from the <i>Petroleum Statement, Monthly</i> <sup>c</sup>	100.0%	0.3%	99.7%	0.5%	99.4%	1.2%

**Initial Monthly Estimates of End-of-Month Primary Stocks As a Percent of EIA's Final Published Estimates <sup>a</sup>**  
January 1977 - December 1979

	<u>Motor Gasoline</u>		<u>Distillate Fuel Oil</u>		<u>Residual Fuel Oil</u>	
	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation
EIA's Estimates from the <i>Monthly Petroleum Statistics Report</i> <sup>b</sup>	99.7%	0.8%	99.7%	1.1%	100.1%	0.7%
EIA's Estimates from the <i>Petroleum Statement, Monthly</i> <sup>c</sup>	99.9%	0.2%	100.0%	0.1%	100.1%	0.5%

# Represents a difference from 100% found to be statistically significant at the 95% level of confidence (n = 36).

<sup>a</sup>Final monthly estimates are from the "Petroleum Statement, Annual" for 1977, 1978 and 1979. The mean percent is calculated as follows: each preliminary estimate is first expressed as a percent of EIA's final published estimate, these are then summed and the sum is divided by the number of estimates. The standard deviation is the square root of the quantity computed by summing the squared deviation of the percents from the mean percent and then dividing by the number of percents.

<sup>b</sup>Based on 36 initial estimates appearing in issues dated January 1977 - December 1979.

<sup>c</sup>Based on 36 initial estimates appearing in issues dated January 1977 - December 1979.

SOURCE: *An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292.



## Note 4 Changes in Petroleum Industry Reporting

Petroleum statistics contained in this report for all years through 1980 were developed using definitions, concepts, reporting procedures and aggregation methods that are consistent with those developed by the U.S. Bureau of Mines. Research conducted by the Energy Information Administration in 1979 and 1980 indicated that changes had occurred in the petroleum industry that were not being adequately reflected in EIA's reporting systems.

EIA reporting forms, definitions, and procedures were modified beginning in January 1981 to describe industry operations more accurately. Unfortunately, empirical information is not available to precisely measure the data shortcomings throughout 1980. However, estimates of the magnitudes of differences in the major data series are described below to form a basis for comparing 1979, 1980, and 1981 data.

### Motor Gasoline

Prior to 1979, the EIA product-supplied series for motor gasoline was consistently about 2 percent lower than the Federal Highway Administration (FHWA) gasoline-sales data series, which is derived from State tax receipts. This difference increased to about 4 percent in 1979 and 5 percent in 1980. There are two primary causes for this growing difference. First, refinery operations, particularly the flows of unfinished oils and the redesignation of some finished products, were not being accurately described on the EIA survey forms. Second, a large amount of gasoline was being produced away from refineries at "downstream blending stations" to take advantage of provisions in regulations governing the amount of lead that could be added. These blending stations were not reporting gasoline production to the EIA until the data system was changed in January 1981.

Quantitative estimates of the magnitude of the difference—in EIA's gasoline product supplied data in 1979 and 1980 have been made by the EIA and the American Petroleum Institute (API). The following table provides 1979 and 1980 data as published in the *Petroleum Statement Annual*, as well as EIA and API estimates of "recast" motor gasoline product supplied. EIA recast estimates were based upon preliminary monthly information in the *Monthly Petroleum Statement*. The ranges displayed in the EIA column reflect uncertainty in the estimates. Also shown are the FHWA motor gasoline sales statistics for those years. EIA has recently published a study of the quality of these FHWA data.<sup>1</sup>

<sup>1</sup>Office of Energy Information Validation, Energy Information Administration, U.S. Department of Energy, *Error Profile of the Motor Fuel Taxation Data used to Establish and Monitor State Emergency Conservation Targets* (Washington, D.C.: December, 1981).

**Finished Motor Gasoline Product Supplied on Old and New Basis  
(Thousand Barrels per Day)**

	1979				1980			
	EIA Reported	API Recast	EIA Recast	FHWA <sup>1</sup>	EIA Reported	API Recast	EIA Recast	FHWA <sup>1</sup>
Jan	6,830	7,230	7,084- 7,246	6,984	6,323	6,789	6,630- 6,791	6,672
Feb	7,254	7,496	7,389- 7,568	7,538	6,596	6,983	6,831- 7,003	6,830
Mar	7,229	7,414	7,301- 7,463	7,316	6,406	6,753	6,607- 6,768	6,713
Apr	7,055	7,300	7,187- 7,353	7,375	6,800	7,014	6,886- 7,052	6,981
May	7,213	7,429	7,313- 7,475	7,428	6,729	6,954	6,823- 6,984	7,044
Jun	7,191	7,483	7,350- 7,516	7,441	6,657	6,966	6,824- 6,991	7,049
Jul	6,902	7,241	7,105- 7,266	7,299	6,743	6,973	6,960	7,132
Aug	7,330	7,546	7,426- 7,588	7,619	6,648	6,841	6,828	7,090
Sep	6,881	7,122	7,016- 7,262	7,232	6,510	6,692	6,962	6,685
Nov	6,791	7,068	6,956- 7,122	7,142	6,234	6,507	6,516	6,951
Dec	6,730	7,106	6,966- 7,127	7,064	6,632	6,948	6,936	6,993
<b>Average</b>	<b>7,034</b>	<b>7,302</b>	<b>7,183- 7,347</b>	<b>7,309</b>	<b>6,579</b>	<b>6,882</b>	<b>6,806- 6,889</b>	<b>6,925</b>

<sup>1</sup>FHWA gasoline statistics published in their 1979 Table MF-33G, 08-06-80, contain aviation gasoline as well as motor gasoline. Only motor gasoline data are included in published 1980 data. Consequently, the 1979 data shown above were reduced by subtracting aviation gasoline product supplied quantities as published by EIA in the 1979 *Petroleum Statement Annual*. The 1980 FHWA data published in their 1980 Table MF-33GA, August 1981, did not require this adjustment.

### Distillate and Residual Fuel Oil

Distillate and residual fuel oil refinery production statistics through 1980 were adjusted to account for an imbalance between unfinished oil supply and disposition. The reported quantities of refinery inputs of unfinished oils typically exceed the available supply of unfinished oils. It has been assumed that this occurs when distillate and residual fuel oil produced by a refinery is shipped to another refinery, where it is treated as unfinished oil. This oil is then reprocessed rather than used or sold as distillate or residual fuel oil.

For many years (including 1980), the difference between unfinished oil disposition and supply was subtracted from distillate and residual fuel oil production to adjust for this discrepancy. Two-thirds of the difference was applied to distillate, and one-third to residual fuel oil.

Beginning in January 1981 this adjustment was discontinued because there was not sufficient empirical evidence to support it. The following table presents distillate and residual fuel oil refinery production in 1980 as published (adjusted) and on the same basis as 1981 statistics are now being completed (unadjusted) to permit comparison between 1980 and 1981 data series. Adjusted distillate and residual fuel oil product supplied volumes differ from the unadjusted volumes by the same amounts as the adjusted and unadjusted production volumes.

**Adjusted and Unadjusted Refinery Production, and Unadjusted Product Supplied of Distillate and Residual Fuel Oils, by Month for 1979 and 1980 (Thousand Barrels Per Day)**

**1979**

Month	Distillate Fuel Oil				Residual Fuel Oil			
	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied
Jan.	3,043	3,108	65	4,646	1,912	1,946	34	3,594
Feb.	2,888	2,945	57	4,869	1,792	1,822	30	3,625
Mar.	3,019	3,026	7	3,671	1,719	1,723	4	3,243
Apr.	2,945	2,978	32	3,048	1,639	1,656	17	2,524
May	3,066	3,093	27	3,025	1,586	1,600	14	2,517
Jun.	3,153	3,187	35	2,743	1,548	1,566	18	2,601
Jul.	3,305	3,344	38	2,601	1,575	1,594	20	2,471
Aug.	3,321	3,359	38	2,799	1,584	1,603	20	2,570
Sep.	3,354	3,306	-48	2,599	1,627	1,602	-25	2,584
Oct.	3,251	3,217	-34	3,085	1,629	1,612	-17	2,523
Nov.	3,239	3,200	-39	3,208	1,736	1,716	-20	2,795
Dec.	3,221	3,238	17	3,725	1,894	1,903	9	3,022
Average	3,152	3,169	16	3,327	1,687	1,695	8	2,834

**1980**

Month	Distillate Fuel Oil				Residual Fuel Oil			
	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied
Jan.	3,013	3,093	80	3,794	1,771	1,812	41	3,108
Feb.	2,766	2,888	122	3,834	1,773	1,836	63	3,168
Mar.	2,557	2,690	133	3,312	1,584	1,652	68	2,726
Apr.	2,460	2,554	94	2,729	1,595	1,643	48	2,492
May	2,474	2,610	136	2,538	1,509	1,579	70	2,305
Jun.	2,646	2,721	75	2,392	1,575	1,613	38	2,369
Jul.	2,689	2,783	94	2,343	1,480	1,528	48	2,339
Aug.	2,461	2,582	121	2,258	1,444	1,506	62	2,348
Sep.	2,686	2,726	40	2,627	1,495	1,516	21	2,380
Oct.	2,589	2,650	61	2,981	1,512	1,543	31	2,258
Nov.	2,703	2,823	120	3,069	1,579	1,641	62	2,513
Dec.	2,891	3,052	161	3,776	1,660	1,743	83	2,762
Average	2,661	2,764	103	2,969	1,580	1,634	54	2,562

**Total Petroleum Products**

The imbalance between the supply and disposition of unfinished oils is now reported as part of the reclassified products (line 39) in the U.S. Petroleum Balance (Table 1). Imbalances between the supply and disposition of gasoline blending components comprise the remainder of the reclassified in Table 1. These imbalances are reported as negative product supplied in the Other Liquids section of the table of Supply and Disposition Statistics (Table 2). Since these changes only involve redistribution of the volumes of gasoline, distillate and residual fuel oil, gasoline blending components, and unfinished oils, the total volume of petroleum products supplied remains unaffected by them.

## Note 5 Notes on Tables

**5.1 Crude Oil and Petroleum Products Overview** statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Crude Oil and Petroleum Products Stock Withdrawal (+) or Addition (-), Petroleum Products Supplied, Total Imports, Crude Oil Imports, Total Exports, and Crude Oil Exports appear as labeled in Table 4. Total Production and Crude Oil Production appear under Field Production in Table 4.

- Natural Gas Plant Production is the sum of Natural Gas Plant Liquids and Finished Petroleum Products Field Production in Table 4.

- Petroleum Products Imports is the sum of Natural Gas Plant Liquids and LRGs, Other Liquids, and Finished Petroleum Products Imports in Table 4.

- Petroleum Products Exports is the sum of Natural Gas Plant Liquids and LRGs, Other Liquids, and Finished Petroleum Products Exports in Table 4.

- Total Crude Oil and Petroleum Products Ending Stocks appear in thousands of barrels in Table 2.

**5.2 Crude Oil Supply and Disposition** statistics on the referenced line appear in Table 1 of the Detailed Statistics, except where noted.

- Total Domestic Field Production, Alaskan Field Production, SPR Imports, Other Imports (synonymous with Imports Gross Excl. SPR), SPR and Other Primary Stocks Withdrawal (+) or Addition (-), Unaccounted For Crude Oil, Refinery Inputs, and Exports appear as labeled in Table 1.

- SPR Ending Stocks and Other Primary Ending Stocks (synonymous with stocks excluding SPR) appear in thousands of barrels in Table 1.

- Total Crude Oil Ending Stocks appear in thousands of barrels in Table 2.

- Total Imports appear in Table 4.

**5.3 Finished Motor Gasoline Supply and Disposition** statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Exports, and Product Supplied appear as labeled in Table 4.

- Unleaded Percent of Total Product Supplied represents the ratio of finished unleaded motor gasoline product supplied to total finished motor gasoline product supplied, multiplied by 100 and rounded to the nearest tenth.

- Ending Stocks appear in thousands of barrels in Table 2.

**5.4 Distillate and Residual Fuel Oil Supply and Disposition** statistics on the referenced lines appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Crude Used Directly, Exports, and Product Supplied appear as labeled in Table 4.

- Ending Stocks appear in thousands of barrels in Table 2.

**5.5 Liquefied Petroleum Gases and Ethane** statistics represent the aggregation of statistics on ethane, propane, butane, butane-propane mixtures, ethane-propane mixtures, and isobutane. The statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.
- Imports, Stock Withdrawal (+) or Addition (-), Refinery Inputs, Exports, and Product Supplied appear as labeled in Table 4.
- Ending stocks appear in thousands of barrels in Table 2.

**5.6 Other Petroleum Products Supply and Disposition** statistics represent the aggregation of statistics on natural gasoline, isopentane, unfractionated stream, plant condensate, other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, and residual fuel oil. The statistics on the referenced line are aggregated from Table 4 of the Detailed Statistics, except where noted.

- Total Production is the aggregated sum of Field Production and Refinery Production in Table 4.
- Imports, Stock Withdrawal (+) or Addition (-), Refinery Inputs, Exports, and Product Supplied are aggregated from Table 4.
- Ending stocks are aggregated from ending stocks in thousands of barrels in Table 2.

#### Note 5.7 Table 1. U.S. Petroleum Balance

- Lines (1) through (3) of Table 1: Crude oil (including lease condensate) production for "Alaska," "Lower 48 States," and "Total U.S." are calculated by calling the conservation agency in Alaska for Alaskan crude oil production during the month, estimating crude oil production in the United States (see Explanatory Note 2.2), and taking the difference to equal production in the lower 48 states.
- Line (5) of Table 1: SPR imports are reported on Survey Form ERA-60.
- Line (12) of Table 1: "Total Other Sources" equals crude oil stock withdrawal (+) or addition (-) plus unaccounted for crude oil plus crude used as fuel and losses in Table 2.
- Line (14) of Table 1: Natural gas plant liquids (NGPL) "Production" equals field production of natural gas plant liquids (NGPL) plus field production of finished petroleum products in Table 2.
- Line (15) of Table 1: NGPL "Imports" equals the sum of the imports of natural gasoline and isopentane, unfractionated stream, and plant condensate imports in Table 2.
- Line (16) of Table 1: NGPL "Stock Withdrawal (+) or Addition (-)" is equal to the sum of stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate in Table 2.
- Line (17) of Table 1 equals the sum of lines (14), (15), and (16) of Table 1.
- Line (18) of Table 1: unfinished oils and gasoline blending components "Stock Withdrawal (+) or Addition (-)" equals stock withdrawal (+) or addition (-) for other hydrocarbons and alcohol, for unfinished oils, motor gasoline blending components, and aviation gasoline blending components.
- Line (20) of Table 1: "Other Hydrocarbons and Alcohol New Supply" equals the field production of same in Table 2.
- Line (21) on Table 1: "Refinery Processing Gain" is a balancing item equal to total refinery production minus total refinery input in Table 2.
- Line (22) on Table 1: "Crude Used Directly" equals the sum of crude oil used directly as distillate and residual fuel oils in Table 2.
- Line (23) of Table 1: "Total Other Liquids" equals the sum of lines (18) through (22) of Table 1.
- Line (24) of Table 1: "Total Production of Products" equals crude oil input to refineries plus field production of NGPL and finished petroleum products; plus imports of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or

addition (-) of other hydrocarbons and alcohol, unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus imports of unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus field production of other hydrocarbons and alcohol; plus total refinery production; minus total refinery input; plus crude oil used as distillate and residual fuel oils in Table 2.

- Line (25) of Table 1: "Gross Imports of Refined Products" equals imports of LPG and ethane plus imports of finished petroleum products in Table 2.

- Line (26) of Table 1: "Exports of Refined Products" equals exports of LPG and ethane plus exports of finished petroleum products in Table 2.

- Line (27) of Table 1: "Net Imports of Refined Products" equals the difference between lines (25) and (26) of Table (1).

- Line (28) of Table 1: "Total New Supply of Products" equals crude oil input to refineries plus field production of NGPL and finished petroleum products; plus imports of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of other hydrocarbons and alcohol, unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus imports of unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus field production of other hydrocarbons and alcohol; plus total refinery production; minus total refinery input; plus crude oil used as distillate and residual fuel oils; plus imports of LPG and ethane and finished petroleum products; minus exports of LPG and ethane and finished petroleum products in Table 2.

- Line (29) of Table 1: "Refined Products Stocks Withdrawal (+) or Addition (-)" equals the sum of stock withdrawal (+) or addition (-) for LPG and ethane, and finished petroleum products in Table 2.

- Line (30) of Table 1: "Total Petroleum Products Supplied for Domestic Use" equals total products supplied in Table 2.

- Lines (31) through (37) of Table 1 equal the respective products supplied in Table 2.

- Line (38) of Table 1: "Other Products Supplied" equals the sum of natural gasoline and isopentane, unfractionated stream, plant condensate, aviation gasoline, naphtha < 400 Deg. F for petrochemical feedstock uses, other oils > 400 Deg. F. for petrochemical feedstock use, special naphthas, lubricants, waxes, coke, asphalt, road oil, still gas, and miscellaneous products supplied in Table 2.

- Line (39) of Table 1: "Total Reclassified" is a balancing item equal to the sum of unfinished oils, motor gasoline blending components, and aviation gasoline blending components products supplied in Table 2.

- Line (40) of Table 1: "Total Product Supplied" is equal to total products supplied in Table 2.

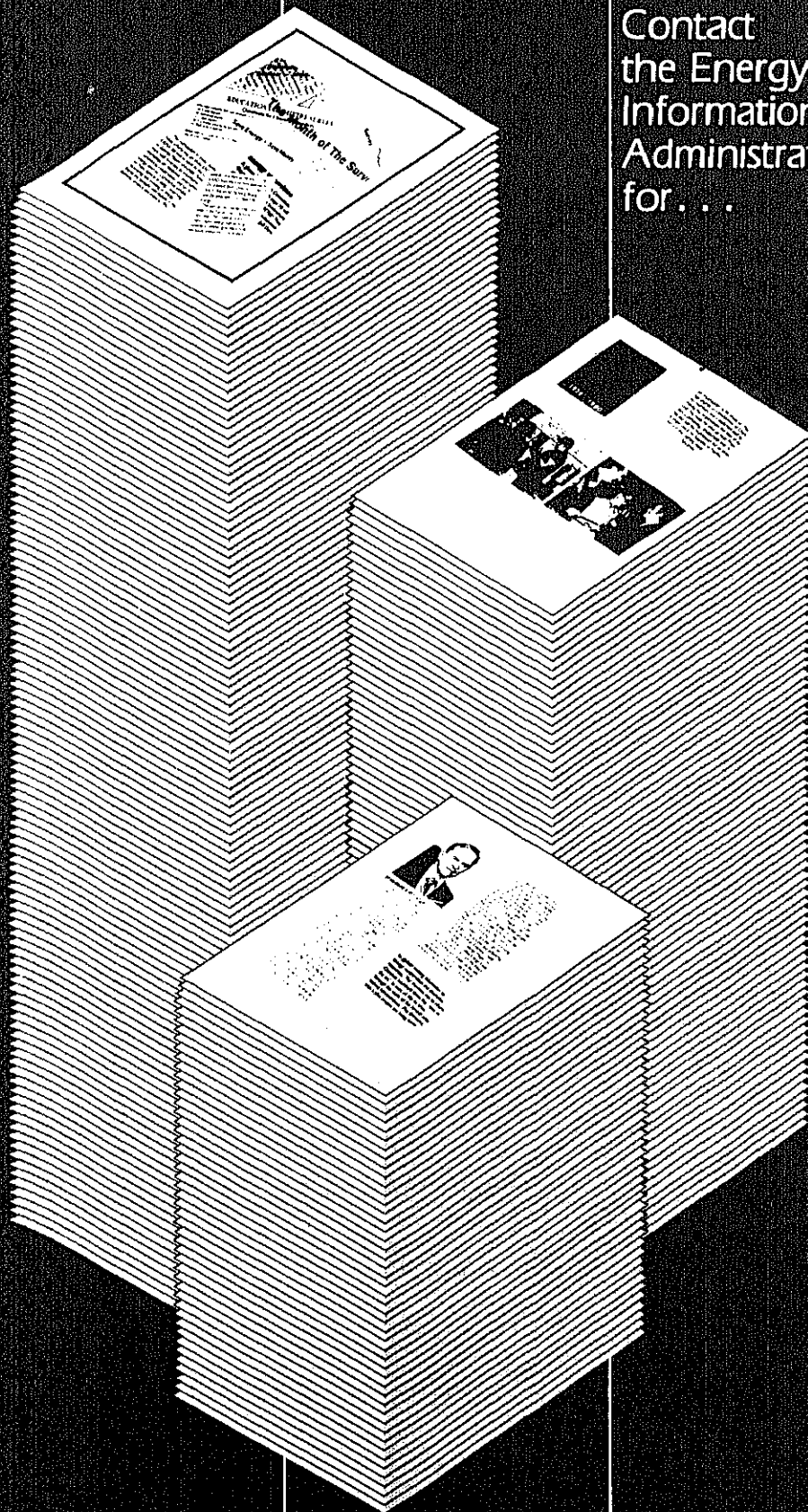
- The sum of lines (41) and (42) of Table 1, stocks of "Crude Oil and Lease Condensate (Excluding SPR)" and stocks held by the "Strategic Petroleum Reserve," equals ending stocks of crude oil in Table 2. SPR stocks are reported on Form EIA-90.

- Line (46) of Table 1, stocks of "Refined Products," equals the sum of LPG and ethane and finished petroleum product stocks in Table 2.



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